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PART III

DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

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SURFACE COAL MINING AND RECLAMATION OPERATIONS

Proposed Rules for Permanent Regulatory Program

[4310-05]

UNITED STATES DEPARTMENT OF THE INTERIOR

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

[30 CFR Chapter VII]

Surface Coal Mining and Reclamation Operations Permanent Regulatory Program

AGENCY: Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior.

ACTION: Proposed rules.

SUMMARY: The Office of Surface Mining Reclamation and Enforcement is seeking comments on these proposed rules which would implement a nationwide permanent program for the regulation of surface and underground mining operations by the States and the Federal Government as required by the Surface Mining Control and Reclamation Act of 1977 (SMCRA). These proposed rules are intended to strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy.

DATES: Comments must be received at the addresses below on or before November 17, 1978, by no later than 5 p.m.

For public hearing dates see Supplementary Information.

ADDRESSES: Written comments must be mailed to: Office of Surface Mining, U.S. Department of the Interior, P.O. Box 7267, Benjamin Franklin Station, Washington, D.C. 20044; or be hand delivered to, and all comments will be available for inspection at: Office of Surface Mining, Room 120, U.S. Department of the Interior, South Building, 1951 Constitution Avenue NW., Washington, D.C. 20240.

For addresses for public hearings see Supplementary Information.

FOR FURTHER INFORMATION CONTACT:

Ron Drake, Special Assistant to the Director, Office of Surface Mining, Department of the Interior, Washington, D.C. 20240; 202-343-5371.

SUPPLEMENTARY INFORMATION: In this document the Office publishes proposed rules to implement the permanent regulatory program under SMCRA. A detailed preamble accompanies the proposed rules to explain the rationale and supporting source material for them, alternatives considered by the agency in developing the proposed rules and changes which have been made since preproposed draft regulations were made available to the public on July 3 and July 21, 1978. Changes reflected in this proposed rulemaking have been made in response to further analysis of source material by the Office, including technical literature, expert evaluation and legislative history of the Act, and in response to public comment received on the preproposed draft rules. The Office is particularly grateful to those who took the time and effort to review the preproposed draft rules and submit comments to the Office. The Office has benefited from those comments. This preamble to the proposed rules highlights some changes which have been made in response to public comment. Other changes will be evident from the content of the proposed rules themselves.

In connection with this rulemaking, the Office has been preparing an environmental impact statement and a regulatory analysis. The availability of drafts of both these documents is being announced through separate FEDERAL REGISTER notices. The Office has considered the material, including source material cited, in the draft environmental impact statement and draft regulatory analysis for purposes of reaching decisions on the content of the proposed regulations. The content of the final environmental impact statement and final regulatory analysis will be carefully considered by officials of the Office and the Department of the Interior before decisions are made on the content of the final regulations.

Within the limits of legal constraints, the Office intends to work as closely as possible with the States, interested groups and organizations, and the public at large during the comment period on these proposed rules. The Office believes strongly the States must take the lead in applying the requirements of the Act and regulations to the coal mining industry. For this reason, the Office is particularly interested in working with the States during the proposed rulemaking comment period to obtain their advice and recommendations concerning how the regulations can best provide for State implementation of this program.

PUBLIC COMMENT PERIOD

The comment period on the proposed rules will extend until November 17, 1978. All written comments must be received at the addresses given above by 5 p.m. on November 17, 1978. Comments received after that hour will not be considered or included in the administrative record for this rulemaking. The Office cannot insure that written comments received or delivered during the comment period to any other locations than specified above will be considered and included in the administrative record for this rulemaking.

AVAILABILITY OF COPIES

Copies of the proposed regulations, draft environmental impact statement and draft regulatory analysis are available for inspection and copies may be obtained at the following offices:

OSM Headquarters, Department of the Interior, Room 120, 1951 Constitution Avenue NW., Washington, D.C. 20240, 202-343-4728.

OSM Region I, First Floor; Thomas Hill Building, 950 Kanawha Boulevard, East Charleston, W.Va. 25301, 304-342-8125.

OSM Region II, 530 Gay Street SW., Suite 500, Knoxville, Tenn. 37902, 615-637-8060.

OSM Region III, Federal Building, U.S. Courthouse, 46 East Ohio Street, Indianapolis, Ind. 46204, 317-269-2609.

OSM Region IV, 601 East 12th Street, Room 1768, Kansas City, Mo. 64116, 816-374-5162.

OSM Region V, Post Office Building, 1832 Stout Street, Denver, Colo. 80205, 303-837-5511.

PUBLIC HEARINGS

Public hearings on the regulations and regulatory analysis will begin on October 24, 1978, and continue through October 27, 1978, as needed to hear all those who wish to testify. The hearings will be held at the following locations and will begin at 9:30 a.m. local time at each location.

Washington—Department of the Interior Auditorium, 18th and C Streets NW., Washington, D.C. 20240.

Knoxville—TVA West Towers Auditorium, 400 Commerce Avenue, Knoxville, Tenn.

Charleston—Charleston Civic Center, Lee and Reynolds Streets, Charleston, W. Va.

Indianapolis—Indiana World War Memorial Auditorium, 431 North Moridian Street, Indianapolis, Ind.

Kansas City—Holiday Inn (Worlds of Fun), 7333 Parvin Road, Kansas City, Mo.

Denver—Room 269, Post Office Building, 1823 Stout Street, Denver, Colo.

Persons wishing to testify at the public hearings on the proposed regulations should contract the appropriate person listed below under public meetings.

Individual testimony at these hearings will be limited to 15 minutes. The hearings will be transcribed. Filing of a written statement at the time of giving oral testimony would be helpful and facilitate the job of the court reporter. Submission of written statements to the persons identified above for these hearings, in advance of the hearing date whenever possible, would greatly assist Office officials who will attend the hearings. Advance submissions will give these officials an opportunity to consider appropriate questions which could be asked to clarify or illicit more specific information from the person testifying. The record will remain open for receipt of additional written comments until November 17, 1978, for the proposed regulations and draft regulatory analysis.

The public hearings will continue on the days identified above until all persons scheduled to speak have been heard. Persons in the audience who have not been scheduled to speak and wish to do so will be heard at the end of scheduled speakers. The hearings will end on each day after all people scheduled to testify and persons present in the audience who wish to speak have been heard. Persons not scheduled to testify, but wishing to do so, assume the risk of having the public hearing adjourned on any given day unless they are present in the audience at the time all scheduled speakers have been heard.

PUBLIC MEETINGS

Representatives of the Office will be available to meet between September 18, 1978 and November 17, 1978 at the request of members of the public, State representatives, industry officials, labor representatives, and environmental organizations to receive their advice and recommendations concerning the content of the proposed regulations.

Persons wishing to meet with representatives of OSM during this time period may request to meet with Office officials at the Washington office or any of the five regional offices. Persons to contact to schedule such meetings are as follows:

Knoxville—(615) 637-8060, Ed Yates.
Charleston—(304) 342-8125, Jill Bowen.
Indianapolis—(317) 269-2609, Peggy Hinkle.
Kansas City—(816) 374-5162, Raymond Lowrie.
Denver—(303) 837-5421, Donald Crane.
Washington—(202) 343-4953, Pat Foulk.

OSM will be available for such meetings between 9 a.m. and noon and 1 p.m. and 4 p.m., local time, Monday through Friday, excluding holidays, at these locations.

PUBLIC COMMENTS

Written and oral comments should be as specific as possible. The Office will appreciate any and all comments, but those most useful and likely to influence decisions on these regulations will be those which include references to source material including legislative history, technical data and research, and other material which provides a basis for any given recommendation. An explanation of the rationale for each recommendation should also be given. The preamble to the final regulations will reflect consideration of comments received on the proposed rules and draft regulatory analysis.

GAO REVIEW

The Office is considered an independent Federal regulatory agency for purposes of 44 U.S.C. Sections 3502 and 3512 (30 U.S.C. Section 1211(e)). As a result, all of its regulations which impose recordkeeping and reporting requirements on members of the public, as defined by GAO regulations, must be submitted to GAO for clearance (4 CFR Part 10). To assist the Office and GAO in analyzing the recordkeeping and reporting burdens and possible duplication created by these proposed rules, the public is specifically requested to consider sections of the regulations listed below. The Office has identified those sections as imposing recordkeeping and reporting requirements, which, if included in final regulations, must be submitted to GAO for their clearance. Specific comments concerning these recordkeeping and reporting requirements, including cost estimates and man-hour requirements, as well as whether other Federal agency recordkeeping or reporting requirements are being duplicated, would greatly assist the Office in determining whether the requirements should be modified.

The Parts, Sections and Subsections of the proposed rules which the Office has identified as imposing recordkeeping or reporting requirements are listed as follows:

Subchapter A
Sections 700.12, 700.13, 707.11(b);

Subchapter C
Sections 730.4(a)-(b), 731.11, 731.12(a), 731.13, 731.14, 732.14, 732.17(b), 732.17(d);

Subchapter D
Sections 741.11(a), 741.12(b)-(c), 742.11, 742.12, 744.12(c), 744.12(e)(3), 745.11, 745.16(a), 745.17, 745.18(c);

Subchapter F
Sections 760.4(b), 760.4(f), 761.5(a), 764.4(a), 764.13, 769.11 to 769.15;

Subchapter G
Sections 770.4, 771.19, 771.21, 771.23, 771.27, 776.3, 776.11, 776.12, 778.4, 778.12 to 778.21;
Parts 779, 780, 782, 783, 784, 785, 787;
Sections 789.12, 790.12, 791.12, 792.12;

Subchapter J
Sections 800.11(a), 800.12(a), 805.14(b), 806.11, 806.14(a), 807.11, 809.12;

Subchapter K
Sections 811.4(a), 815.4, 815.12(a), 815.12(h)-(i), 815.13, 816.46(c), 816.46(v), 816.50(d), 816.52, 816.53(a), 816.62, 816.64, 816.67, 816.68, 816.71(j), 816.82(a)(4), 816.82(b), 816.87(a), 816.91(d), 816.95(d), 816.97(b), 816.99, 816.117(b), 816.131, 816.133(c), 817.46(c), 817.46(v), 817.49(a), 817.52, 817.53(a), 817.62, 817.68, 817.71(j), 817.82(a)(4), 817.87(a), 817.91(d), 817.95(d), 817.97(b), 817.99, 817.117(b), 817.122, 817.123, 817.125, 817.131(b), 817.133(c), 818.12(a), 821.13(a), 822.14, 825.12(d), 826.12(b), 826.13, 828.12(b), 840.14, 842.12(a), 842.14, 842.15, 843.16(a);

Subchapter M
Sections 850.3(c), 851.11(a)-(c), 851.13, 851.14(d)(ii), 851.15(a).

INTRODUCTION TO PROPOSED RULES

As noted in prior FEDERAL REGISTER notices announcing the availability of preproposed draft regulations, the Office has sought to provide early and meaningful public participation in the development of regulations for the permanent regulatory program. The procedures followed have been consistent with the emphasis placed on public participation in SMCRA and Executive Order 12044. Comments which have not been fully evaluated, and comments received after August 18, 1978, on the preproposed draft rules, will be considered in the context of the public comment period on the proposed rules.

One area of concern to the Office has been the manner in which geological, climatological, hydrological, and other regional variations which might support alternative approaches to achieving the performance standards in the Act and regulations can be accommodated in the State program application and approval process. The preproposed draft regulations provided that the States could submit a petition pursuant to Section 201(g) of the Act demonstrating the basis for including within their State program a regulatory provision departing from specific Federal regulatory requirements while, nevertheless, achieving the same regulatory result. The Office felt that such a process would focus specific attention on requests from the States for variations in their State programs from that required in the Federal regulations.

Comments received on the preproposed draft suggested that the procedures in the draft do not recognize regional variations which would justify different requirements in individual State programs from those contained in the Federal regulations. The purpose of the section 201(g) procedure was not clear to reviewers. The relationship of the procedure to State program variations was not clear. Based on these comments, the procedures for recognizing regional variations in State programs have been changed for purposes of this proposed rulemaking.

Section 731.13 of these proposed rules now provides that States may include in their State program applications, requests for approval of regional variations for substantive and procedural requirements in their State programs. The application would have to provide a rationale and supporting data which would justify a departure from the Federal regulations. Consideration of the request would occur in

the context of the Federal rulemaking for decision on the State program application. The State program application requesting departures from the Federal regulations would have to demonstrate that the requested departure is no less stringent than that included in the Federal regulations. The Office believes that this approach provides an easier procedural mechanism and maintains the visibility of any State requests for departures from the Federal regulations. Comments on this approach from the States and others would be helpful.

The proposed rules being published today provide for a full 60-day comment period. Inability to have commented on all or portions of the preproposed draft regulations will not prejudice a person's ability to influence specific provisions in the final regulations by commenting on them during the proposed rulemaking comment period. Significant changes were made by the Office in the final interim regulations published December 13, 1977, based upon comments received during the public comment period on those rules during the fall of 1977. The Office will be equally receptive to comments received during this rulemaking process which provide sound justification for changes in the final rules.

The Office anticipates that requests will be made for extension of the 60-day comment period on the proposed rules. Although the Office is sympathetic, we are compelled by the statutory deadlines and the approaching State legislative sessions in the winter and spring of 1979 to proceed on this schedule as expeditiously as possible. Congress established very tight schedules for implementing the initial and permanent regulatory programs, recognizing that a regulatory program establishing national minimum requirements should not be delayed any longer, as it would be under typical Federal Government rulemaking of this magnitude. The Office has no choice but to act as promptly as it can to fulfill the congressional intent that this program be implemented promptly.

Public comments received on the preproposed draft regulations urged a reorganization of at least two aspects of that draft. Many commenters suggested that all definitions be consolidated and located in one part of the regulations. These commenters reason that having them in one location would be far easier for reference purposes than having them interspersed throughout the various parts of the regulations.

In response to this comment, the proposed rules show a shift in this direction. Part 701 of the regulations, which basically is an introduction to the permanent regulatory program, contains in the proposed regulations most of the definitions which apply to the permanent program. Part 701, however, does not contain all the definitions used in Chapter VII of this Title. Part 700 contains definitions of terms which are used throughout all of the Chapter VII regulations. These include such common words as "Director", "coal", "Act", and other terms that are not unique to the permanent regulatory program. Part 710 of Chapter VII, which was promulgated on December 13, 1977, contains those definitions which apply to operations during the initial regulatory program. Interspersed throughout the remaining Parts of Chapter VII will be definitions of terms which are used in a specific sense in those respective Parts. In most cases they have been left in those specific Parts for purposes of definition because elsewhere in the regulations their meaning will be more general and reflect commonly understood usage.

Other comments were received concerning the organization of Part 816 which covers performance standards for surface mines under the permanent program. In the preproposed draft regulations this Part was organized in a logical mining sequence. On the other hand, Part 817 in the preproposed draft regulations was organized in a topical format. Comments received suggest that the topical format is more useful to the public and, consequently, Part 816 has been reorganized in this format.

General Purpose

The proposed rules are intended to fulfill, when promulgated as final, a congressional mandate that the Secretary promulgate regulations covering a permanent regulatory procedure for surface coal mining and reclamation operations performance standards and establish procedures and requirements for the preparation, submission and approval of State programs or in the alternative development and implementation of Federal programs. The permanent regulatory program is the second and final stage of the phased implementation contemplated by Congress and incorporated in SMCRA. Under the Act and these regulations, States are intended to take the lead in regulating surface coal mining and reclamation operations within their borders. The success of the permanent regulatory program depends upon the willingness and ability of States with coal production to assume this responsibility.

The permanent regulatory program applies in Subchapter K the Act's 25 performance standards in Section 515 to surface coal mining and reclamation operations. Under the interim program, only seven performance standards are applicable to surface coal mining and reclamation operations. The full complement of performance standards will begin to apply to surface coal mining and reclamation operations upon receiving a permit issued under a State or Federal program or, for Federal lands, a Federal lands program. This means that for non-Federal and non-Indian lands, the performance standard should be applicable to surface coal mining and reclamation operations no later than February 3, 1981. This stems from the fact that by June 3, 1980, a Federal program will be implemented in a State if a State program has not been approved. The Act provides that eight months following the implementation of the Federal program or approval of a State program, no surface coal mining and reclamation operations shall be conducted without a new permit issued under either of those programs. If state programs are approved before June 3, 1980, or a Federal program is implemented before that date, the application of the full set of performance standards to surface coal mining and reclamation operations would occur at an earlier date.

Organization

The regulations being proposed at this time are intended to implement the requirements of the Act consistent with its purposes as stated in Section 102, its legislative history and relevant judicial interpretations. The material is organized into subchapters which comprise major portions of Chapter VII of this Title.

Existing Part 700 which is in Subchapter A would be amended by these proposed regulations to include appropriate references to the permanent regulatory program. Part 701 is new and being added to serve as a general guide to the permanent regulatory program. Part 707 in Subchapter A provides regulations implementing a limited exemption from the Act for the extraction of coal which is incidental to Government financed highway or other construction.

Subchapter B of Chapter VII comprises the initial regulatory program and the Parts which were published on December 13, 1977.

Subchapter C describes the process by which States may apply for and obtain approval of regulatory programs. It also includes measures by which a Federal program would be implemented in a State which has not obtained or maintained an approved State program. The grant regulations authorizing distribution of money to the States for development, administration, and enforcement of State programs which were promulgated on De-

cember 13, 1977, are included in this Subchapter.

The application of the permanent regulatory program on Federal lands is covered by Subchapter D. The Act calls for promulgation of a Federal lands program which at a minimum, incorporates all the requirements of the Act. In contrast to the State program or Federal program, the Federal lands program becomes effective upon the effective date of the final regulations. Thus, application of the full set of performance standards will apply to surface coal mining and reclamation operations on Federal lands in advance of their application to these operations on non-Federal and non-Indian lands.

The Act provides mechanisms for determining that certain lands may be unsuitable for all or certain types of surface coal mining and reclamation operations by designating them unsuitable for coal mining. Such designations may also be terminated under applicable procedures. These provisions of the Act are implemented through regulations in Subchapter F.

A fundamental difference between the interim and permanent regulatory programs, in addition to that mentioned previously for performance standards, is reflected in Subchapter G. This Subchapter includes all of the requirements for permit applications and approvals to conduct surface coal mining and reclamation operations. The application process applies to surface mining activities, underground mining activities, and special categories of coal mining. Certain procedures are also established for coal exploration, although a formal permit is not required. As part of the two-stage process for phasing in the requirements of SMCRA, Congress determined that during the initial regulatory program States could apply the interim performance standards under their existing State permitting procedures. This, however, is not the case for the permanent regulatory program and the Office expects that significant revisions in State permitting programs will insue from this permanent program.

Inspection and enforcement procedures are an integral and important factor in the success of the regulatory program. The requirements and procedures for inspections and enforcement and the requirements for civil penalties that may follow are covered in Subchapter L. Distinctions are drawn between the inspection and enforcement provisions under State programs and Federal programs.

Subchapter M reflects and implements the congressional determination that persons engaging in or directly responsible for blasting or use of explosives in surface coal mining operations should receive adequate training and be certified for that purpose only after suitable examination. The regulations in this Subchapter call upon the states to take the lead in training, examination and certification of blasters.

SUBCHAPTER A—GENERAL

PART 700 GENERAL

Part 700 introduces the regulations encompassed by Chapter VII of Title 30 of the Code of Federal Regulations. The proposed regulations in Chapter VII implement the Secretary of the Interior's responsibility under the Surface Mining Control and Reclamation Act of 1977 (Pub. L. 95-87, 91 Stat. 445, 30 U.S.C. Section 1201 *et. seq.*). The Secretary's general rulemaking authority for regulations in Chapter VII is found in Section 201(c)(2) of the Act. In addition, the following sections of the Act contain rulemaking authority for the regulations in Chapter VII: Sections 304, 412(a), 512, 515 (c) and (d), 516, 517(h), 527, 528, 529, 601(d), 708, 719.

§ 700.1 Scope.

This Section would provide a brief summary of the thirteen Subchapters which compose Chapter VII of Title 30 of the Code of Federal Regulations. It serves as a guide to the reader interested in obtaining a summary of the regulations and contains no substantive provisions.

§ 700.2 Objectives.

This section would set forth a simple statement concerning the objectives of the regulations. The regulations are intended to fulfill the purposes of Section 102 of the Act. The regulations implementing those purposes must be based, however, upon consideration of the language in the substantive provisions of the Act, the legislative history of those provisions, other applicable laws, particularly those recited in Section 702 of the Act, and judicial interpretations.

§ 700.3 Authority.

This section would recite the Secretary's authority under the Act to implement its programs, except where programs and responsibilities are specifically assigned to other agencies by the Act or authority is retained by the States.

§ 700.4 Responsibilities under the Act.

This section would identify the Secretary's authorities derived from the Act which have been delegated to the Director. The delegation is to the Director through the Assistant Secretary, Energy and Minerals, of the Department of the Interior, who is ultimately responsible to the Secretary for implementation of the programs in Chapter VII.

This section would also recognize that the Director has a responsibility to confer with Federal land managing agencies and Federal agencies with jurisdiction over natural resources on Federal lands prior to taking actions which could affect their responsibilities. Recognizing the multifaceted effects of regulating surface coal mining and reclamation operations on Federal lands, this Section recognizes that the Director cannot proceed without considering the effects of actions under these regulations upon responsibilities of other Federal agencies. For instance, land managing agencies such as the Bureau of Land Management and the Forest Service will be particularly concerned about questions of designating lands unsuitable for mining, whether a permit should be issued, or the proper postmining land use. The Department of Energy and the Geological Survey are concerned with conservation of the coal resource and diligent development. The Department of Labor is concerned with the health and safety of the miners. Other agencies specified in this section are concerned with fish and wildlife and related environmental values, air and water pollution and historic and cultural resources.

Section 700.4 would recognize that the States must assume primary responsibility under State programs for regulating coal exploration and surface coal mining and reclamation operations if the regulatory program established by the Act is to be successful. The proposed regulations which implement the Title V regulatory program in the Act are intended to provide the minimum requirements for State programs which will create the uniform level of enforcement throughout the country which is contemplated by the Act.

Consistent with the principle that the States should take the lead in regulating surface coal mining and reclamation operations within their borders, with respect to regulation on Federal lands, subsection (d) would recognize that the Secretary may delegate certain responsibilities and authority to the States pursuant to Section 523(c) of the Act. In response to comments, the word "limited" has been deleted from the pre-posed draft as unnecessary to describe the Federal-State relationship under a cooperative agreement.

Section 700.5 gives definitions for terms which are generally applicable throughout the Act and regulations. Some of the definitions would repeat statutory definitions. Comments on the preproposed draft rules suggested that definitions in this category be deleted. OSM has decided to retain such

definitions here and in Part 701 on the theory that the regulations should be as complete as possible in order that persons using them will not have to turn constantly to the Act looking for terms defined there and not included in the regulations. Definitions repeating statutory definitions include: "Federal lands," "Federal lands program," "Fund," "Indian lands," "Indian tribe," and "Office," and "mining operations."

"Person." The definition of this term would expand upon the definition in Section 701(19) of the Act. The proposed definition includes Indian tribes in those situations in which an Indian tribe may be conducting surface coal mining and reclamation operations on non-Indian lands. In addition, the governmental agencies listed in Section 524 of the Act would be included because they are subject to regulation when engaged in surface coal mining and reclamation operations. A joint venture would also be added to the definition of "person" on the basis that it is a type of business organization which should be specifically identified in the definition.

"Public office." This definition would be included in the regulations to identify the kind of office in which records required by the Act to be made available to the public will be placed.

"Regulatory authority." The definition of this term in Section 701(22) would be expanded to include situations not covered by the statutory definition. Specifically, the Secretary is defined as the regulatory authority under a Federal lands program. The Federal lands program is a regulatory program in most respects comparable to a State program or a Federal program. For this reason and ease of reference in the regulations, the Secretary is defined as the regulatory authority for a Federal lands program.

"State regulatory authority." The State regulatory authority would be defined as the State agency which has primary responsibility at the State level for administering the regulatory programs. The use of the phrase "primary responsibility" signifies that one State agency is to be designated the regulatory authority for purposes of dealing with the Office under the regulations in this Chapter. The definition does not prevent States from assigning specified responsibilities under the State program to other agencies, provided memoranda of understanding or other working agreements have been established between the regulatory authority and the other State agency or agencies, in order that there will be a uniform, coordinated State program.

The definition of "surface coal mining operations" follows the statutory definition except that it would include reference to extraction of coal from coal refuse piles. Questions have arisen during the interim program as to whether coal extraction from coal refuse piles is regulated under the Act. Analysis of the statute and legislative history has convinced the Office that such extraction is an operation intended to be regulated under the Act. Therefore, it is proposed for explicit inclusion in the definition of surface coal mining operations. (See letter from the Solicitor, Leo Krulitz, to Representative Gus Yatron, dated March 13, 1978.)

Changes have been made in the permit and performance standard provisions of the proposed rules to reflect the Office's interpretation that the phrase "at or near the mine site," used in the statutory definition of "surface coal mining operations," modifies only "loading of coal." The Office interprets the Act as setting no territorial limitation on its jurisdiction over other facilities identified in the definition preceding "loading of coal."

"Resulting from and incident to." Definition of this term in the context of "surface coal mining operations" would be added in order to clarify those operations which are subject to the permit and performance standard requirements of the Act and this Chapter.

§ 700.11 Applicability.

This section proposes to repeat the exemption for those surface coal mining and reclamation operations which are exempted from regulation by the statute. Paragraphs (a) and (b) would repeat the language of the statutory exemptions in Section 528 of the Act. The concept of noncommercial use in (a) is limited based upon applicable legislative history. S. Rep. 95-128, 95th Cong., 1st Sess. 97-98 (1977). For the two-acre exemption in (b), language has been added in response to a comment to clarify that it is to be calculated based upon the expected life of the operation. This language is necessary to eliminate potential abuse of this exemption by persons conducting a series of two acre operations which are in actuality part of a larger mining operation. Paragraph (c) would reference Part 707 of Subchapter A for the regulations governing coal extraction which is an incidental part of Federal, State or local government-financed highway or other construction. Paragraph (d) proposes to include the exemption which appears in the definition of surface coal mining operations in Section 701(28) of the Act.

Section 201(g) of the Act provides a petitioning process for initiation of a proceeding to issue, amend or repeal rules issued under the Act. This process would be incorporated in Section 700.12 of the proposed regulations. The process proposed here is basically the same as that specified for the initial regulatory program.

A change from the initial regulation on petitions would be to place a burden upon the petitioner to present facts, technical justification and legal arguments which support the petition. If the petition concerns an existing rule, it would have to present justifications and arguments not considered in the previous rulemaking. The Director would have authority to reject a petition which did not provide this information and create a reasonable basis for further consideration of the need to issue, amend or repeal a rule. This proposal is also intended to eliminate the need for further consideration of petitions which are frivolous and do not provide a minimum threshold of information meriting the initiation of the administrative process. Without such a threshold, the day-to-day administration of these regulations could be jeopardized by the burden resulting from frivolous and unwarranted petitions.

In response to a comment, language has been added to the proposed rule indicating that the Director's decision on a petition is a final decision for the Department. This has the effect of leaving open the opportunity for a judicial appeal of the decision.

§ 700.13 Prior notice of citizen suits.

This proposed regulation is repeated from the initial program regulations with only minor changes intended for clarification.

§ 700.14 Request for records.

In response to public comment, subsection (a) has been revised to indicate that the records are to be available at the office geographically closest to the area to which the document pertains. OSM does not believe Congress intended new offices to be opened throughout the country in the vicinity of mines simply to make documents available.

§ 700.15 Computation of time.

These proposed regulations are repeated from the initial program regulations with only minor changes intended for clarification.

PART 701—PERMANENT REGULATORY PROGRAM

General · Introduction: This part serves as a general introduction to the permanent regulatory program which is being proposed in accordance with the requirements of Section 501(b) of the Act. The permanent regulatory program represents full implementation of the regulatory scheme created by Congress in Title V of the Act. When the permanent regulatory pro-

gram is implemented through State or Federal programs, and the Federal lands program all the applicable regulatory requirements and performance standards of Title V will apply to coal exploration and to surface coal mining and reclamation operations throughout the country.

The initial regulatory program under the Act was implemented through regulations promulgated on December 13, 1977, and applies to surface coal mining and reclamation operations in a particular State until a State program is approved or a Federal program is implemented in that State under the permanent program. The initial program does not apply all the Act' s performance standards to surface coal mining and reclamation operations, nor does it apply the Act's permit system to those operations.

Under Section 710 of the Act, an initial set of performance standards became applicable to surface coal mining and reclamation operations on Indian lands on December 16, 1977, when regulations were published in the FEDERAL REGISTER. However, Section 710 of the Act does not apply permit application and approval requirements, bonding requirements, and all the performance standards to these operations on Indian lands until 30 months following enactment of the Act. Therefore, regulations applying these requirements to Indian lands are not being proposed at this time.

Part 701 is intended to address matters which are of general applicability to the permanent regulatory program. It would describe the authority of the States and the Office during the permanent program. It proposes definitions of general applicability to all aspects of the permanent regulatory program. Finally, it would establish when the permanent regulations become applicable to coal exploration and to surface coal mining and reclamation operations.

Authority for regulations in this Part is found in the Secretary's general rulemaking authority in Sections 201(c)(2), and 501(b) of the Act. In addition to these sections, authority for Section 701.11 of the regulations in this Part is found in Sections 506, 512, 515 and 516 of the Act.

§ 701.3 Authority.

This Section identifies the respective responsibilities of the Director and of a number of Federal officials whose concurrences must be obtained over portions of the regulations before their final promulgation.

§ 701.4 Responsibility

The State and Federal relationship in the permanent regulatory program is summarized in Section 701.4. A State with an approved State program would have primary responsibility for regulating surface coal mining and reclamation operations within its borders. Under such circumstances, persons conducting coal exploration or surface coal mining and reclamation operations would be subject to regulation by the State regulatory authorities, rather than the Office.

The Federal role in States with an approved program is minimal. The Act does require the Office to evaluate the administration of the State program. (Section 517 of the Act.) To do this the Office would conduct periodic inspections of surface coal mining and reclamation operations in the State to establish whether they are in compliance with the State program. The Office would review permits, inspection reports and enforcement actions of the State regulatory authority to determine whether the State is fulfilling the responsibilities it assumed in its program.

In addition to the role of evaluating State programs, the Office would be required to respond affirmatively to information it receives which creates a reasonable belief that a person may be violating the Act, regulations or any permit condition. (Section 701.4(b)(3).) The process called for by Section 521(a) of the Act and proposed in Part 842 of the regulations would result in the State taking appropriate action when informed of this information by the Office, or the Office proceeding with an inspection and issuing a cessation order under appropriate circumstances.

In connection with its responsibilities for evaluating the administration of a State program, the Office would have the option, when necessary, of taking over enforcement of a State program or substituting a Federal program for the State program. These responsibilities are referred to in Section 701.4 and reference is made to the detailed procedures found in Part 733 which would be followed should such action become necessary.

Section 701.4 would identify the statutory alternative to a State program during the permanent regulatory program. That alternative is a Federal program which would be implemented in a State, if a State fails to have an approved program by June 3, 1980. When a Federal program is implemented in a State, the Office would become the exclusive regulatory authority for all coal exploration and surface coal mining and reclamation operations in that State.

§ 701.5 Defintions.

1. Definitions which apply during the permanent program are found in Section 701.5. In response to comments on the preproposed draft rules, definitions for the permanent program which have the same meaning in more than one subchapter of Chapter VII have been moved to Section 701.5. Definitions generally applicable to all of Chapter VII remain in Part 700. The process of reorganizing the location of definitions will continue during the comment period on the proposed rules.

The Office believes that the words not defined in the regulations have generally accepted meanings that will not lead to ambiguity or misinterpretation. The Office invites suggestions for definitions of words used in the permanent program regulations which have not been defined in this section. In each case, the most helpful suggestions will be those accompanied by the rationale for the proposed definition and its source in technical literature or elsewhere.

2. The principal sources of technical definitions are American Geological Institute, Glossary of Geology, 1972; American Society of Civil Engineers, Nomenclature of Hydraulics, 1962; U.S. Bureau of Mines, Dictionary of Mining, Mineral, and Related Terms, 1968; Bituminous Coal Institute, Glossary of Current and Common Bituminous Coal Mining Terms, 1947; Soil Science Society of America, Glossary of Soil Science Terms, 1970; and Soil Conservation Society of America, Resource Conservation Glossary, 1976.

3. The definitions for the following words or phrases are essentially the same as those in the initial program regulations previously promulgated. (30 CFR 710.5, 42 F.R. 62678 *et seq.*, December 13, 1977): "acid drainage," "acid-forming materials," "combustible material," "compaction," "diversion," "embankment," "ephemeral stream" (which is defined in the initial regulatory program regulations within the definition of "intermittent or perennial stream"), "ground water," "highwall," "hydrologic balance," "impoundment," "intermittent or perennial stream," "leachate," "noxious plants," "overburden," "outslope," "productivity," "recharge capacity," "recurrence interval," "roads," "runoff," "safety factor," "sediment," "sedimentation pond," "slope," "spoil horizons," "spoil," "stabilize," "surface water," "suspended solids," "toxic-forming materials," "toxic mine drainage," "valley fill and head-of-hollow fill," and "water table."

Aquifer is defined as it was in the initial program. Eight separate sources were consulted prior to adopting a definition of the term aquifer. The only substantive difference in the various definitions is the wording; all of the definitions consistently contain the concept that an aquifer is a body of earth materials that can store and transmit water in sufficient quantities for a specific use. The proposed defini-

tion involves the same concept and is consistent with the established definitions. The eight definitions are as follows:

(1) American Geological Institute, 1972, Glossary of Geology: A body of rock that contains sufficient saturated permeable material to conduct ground water and to yield economically significant quantities of ground water to wells and springs;

(2) U.S. Bureau of Mines, 1968, Dictionary of Mining, Mineral, and Related Terms: An underground stratum that will yield water in sufficient quantity to be of value as a source of supply;

(3) Soil Conservation Society of America, 1976, Resource Conservation Glossary: A geologic formation or structure that transmits water in sufficient quantity to supply the needs for a water development; usually saturated sands, gravel, fractures, and cavernous and vesicular rock;

(4) UNESCO, 1970, International Glossary of Hydrology: A porous water bearing bed or stratum of permeable rock, sand, or gravel capable of yielding significant quantities of water;

(5) CRC Press, 1973, Dictionary of Water and Water Engineering: A relatively permeable or fissured deposit which yields useful supplies of water when tapped by a well;

(6) American Public Health Society, American Society of Civil Engineers, American Water Works Association, and Water Pollution Control Federation, 1969, Glossary of Water and Waste Water Control Engineering: A porous water-bearing geologic formation. Generally restricted to materials capable of yielding an appreciable supply of water;

(7) American Society of Civil Engineers, 1962, Nomenclature for Hydraulics: A porous water bearing formation; and

(8) USGS Water-Supply Paper 1988, 1972, Definitions of Selected Ground Water Terms: A formation, group of formations, or part of a formation that contains sufficient saturated material to yield significant quantities of water to wells and springs.

The proposed definition is structured to apply to real and practical situations where a question of hydrological balance is involved. If there is a reasonable likelihood that such a strata has served in the past or will in the reasonable future serve to transmit sufficient quantities of water, then it will be considered an aquifer and treated accordingly. Any other interpretation of the Act and regulations would subvert Congress' clear intent to protect rigorously the water resources in areas of surface mining. Although the Act does not define aquifer, the term was defined in the 1974 House bill, H.R. 11500, as follows: "The term 'aquifer' means a zone, stratum, or group of strata, that can store and transmit water in sufficiently recoverable quantities to be of economic or ecologic value as a source of water. Section 705(29)." The Secretary's definition is thus also in accord with that once considered by the House of Representatives.

The terms "head-of-hollow fill" and "valley fill" are proposed to be redefined to (1) distinguish between fills that are placed at the uppermost reaches of a valley and those which are placed lower in the valley and which involve a substantial upstream drainage area and (2) clarify the distinction between head of hollow fills or valley fills and other fills on relatively flat areas. The differences between valley fills and head-of-hollow fills were implied in the initial regulatory program. The new and separate definitions in 701.5 are based on the location of the fill. Those portions of the definitions used in the initial regulatory program that provided performance standards rather than definition were removed. The minor drainage channel condition for fills in the initial regulatory program has been refined to reflect the need to accommodate placement of excess soil developed from the first cuts of an area mine as well as to accommodate placement of excess soils in relatively flat areas where the stream drainage area is small and wet areas do not exist in the gently sloping or flat fill area. The Office believes that areas with slopes of 20 degrees or more provide less stable conditions for fills and will concentrate surface water runoff to a higher degree than will gently sloping areas. Thus, fills in drainage areas with these steeper slopes are subject to the valley fill and head-of-hollow fill requirements. The Office considers the standards for valley fills and head-of-hollow fills mandatory if any part of the fill area contains seeps or ephemeral channels or if the fill may become partially saturated.

The Office recognizes that a dimensional definition of gullies as well as identification of lesser slopes and the identifications of annual vegetation amounts may facilitate determinations of situations in which valley fill or head-of-hollow fill requirements apply. Therefore, public comment recommending further criteria is solicited. The Office is considering the development of performance standards for fills in areas of low annual precipitation (e.g. less than 26") or geographical areas (e.g. west of the 100th meridian west longitude) or types of mining (e.g. area mining as occurs in parts of the interior western United States and mid western United States) in order to further clarify the requirements.

Also, "temporary diversions" and "permanent diversions" have the same meanings given them in the body of the initial program regulations. See 30 CFR Sections 715.17(c) and 717.17(c), 42 F.R. 62685 and 62697, December 13, 1977.

The definition for "underground mining activities" comes from definitions given for underground mining terms in section 717.11 of the initial program regulations. 30 CFR Section 717.11, 42 FR 62695, December 13, 1977.

The definition of "coal processing waste" is intended to differentiate spoil, overburden and solid waste from the types of material subject to the standards which would be found primarily in Sections 816.81-816.88, 817.81-817.88 and other sections as referenced in Section 812.12 of these regulations. The term appears in the Act in Subsections 515(b)(11) and (13) and 516(b)(4) and (5). This definition appears in the initial program regulations as the definition of "waste." 30 CFR Section 710.5, 42 F.R. 62679, December 13, 1977.

The definition of "mulch" is essentially the same as that in the initial program regulations previously promulgated 30 CFR 715.20(d); 42 F.R. 62691, December 13, 1977. The term "other suitable materials" is used to provide needed flexibility to take advantage of advances in reclamation practices and to overcome a long listing of applicable vegetation, organic wastes, or chemicals. Compost is one of many suitable mulching materials along with bark materials, chemical additives, hay, straw, organic wastes and wood fiber.

The definition of "underground development waste" is based largely on the definition of "refuse" in the regulations promulgated under the Mine Safety and Health Act of 1969, as amended. See 30 CFR Section 77.217(e). The definition of "hydrologic balance" is supported by discussion in the House Committee Report on H.R. 2, H. Rep. No. 95-218, 95th Cong., 1st Sess. 109-113 (1977). The definition remains the same as that used in the initial program.

Section 701.5 includes nine definitions that have special importance to alluvial valley floors. The defined phrases and the sources of the proposed definitions are as follows:

(a) *Alluvial valley floors*—taken from Section 701(1) of the Act.

(b) *Agricultural activities*—developed from generally accepted usage but modified to exclude those agricultural practices that do not derive benefit from subirrigation or the use of flood irrigation.

(c) *Flood irrigation*—developed from generally accepted usage.

(d) *Subirrigation*—developed from standard definitions (see Glossary of Geology, American Geological Institute, 1972) and modified to include indicators of the presence of water based on technical input from reclamation staffs in Montana, Wyoming, Colorado, Utah, and North Dakota during development of the technical guidance paper on alluvial valley floors published at 43 F.R. 38055; on August 25, 1978.

(e) *Arid and semiarid areas*—generally defined in terms of areas of water deficit for normal plant requirements per standard agricultural usage.

(f) *Upland areas*—developed from standard geomorphic usage, Section 701(1) of the Act and field observations conducted for reconnaissance analysis of alluvial valley floors in the development of the aforementioned technical guidance paper.

(g) *Unconsolidated stream-laid deposits holding streams*—developed from the Act, field inspections conducted by the Department and the development of the technical guidance paper.

(h) *Essential hydrologic functions*—developed from the Act, legislative history, and field inspections.

(i) *Undeveloped rangelands*—developed from consultation with technical representatives of State and Federal agencies during the development of the technical guidance paper.

These definitions were developed from the technical guidance paper on alluvial valley floors published at 43 F.R. 38035; August 25, 1978, and

(1) Hardaway, J. E., Kimball, D. B., Lindsay, S. F., Schmidt, J., Erickson, L., March 1977. Subirrigated Alluvial Valley Floors; A Reconnaissance of Their Properties and Occurrence on Coal Resource Lands in the Interior Western United States (U.S. EPA, Region VIII, Denver, Colo.); Proceedings of National Coal Association and Bituminous Coal Research Symposium in Oct. 1977, pp. 61-135.

(2) Malde, H. E., and Boyles, J. M., 1976. Maps of Alluvial Valley Floors and Strippable Coal in 42 7½-Minute Quadrangles, Big Horn, Rosebud, and Powder River Counties, Southeast Montana, U.S.G.S. Open File Report 76-162.

(3) Schmidt, J., 1977. Alluvial Valley Floors in East-Central Montana and Their Relation to Strippable Coal Reserves; Reconnaissance Report, U.S. EPA, Region VIII in cooperation with State of Montana;

The following references were used to develop discussions of the characteristics of unconsolidated stream-laid deposits and subirrigation:

1. Leopold, Luna B., M. Gordon Wolman, and John P. Miller, 1964, "Fluvial Processes in Geomorphology:" San Francisco, W. H. Freeman and Company, 522 pp.

2. Robinson, T. W., 1958, Phreatophytes: U.S. Geological Survey Water-Supply Paper 1423, 84 pp.

3. Schumm, Stanley A., 1977, "The Fluvial System": New York, John Wiley & Sons, 338 pp.

The Department recognizes the possible existence of alluvial valley floors in arid and semiarid areas of Alaska. Not describing these areas in these regulations at this time does not represent a determination that there are no arid and semiarid areas in Alaska. At a later time, these determinations will be made.

No major alternatives to these definitions were considered with the exception of "arid and semiarid." Principal alternatives considered were (1) equating semiarid to 26 inches or less annual precipitation, (2) using precipitation-evaporation comparisons to show water deficits for vegetation, and (3) vegetation communities such as short grasses. Use of these alternatives would result in semiarid boundaries running through certain coal fields such as those in central Texas. Therefore, the Department has selected the 100th meridian west longitude as the eastern limit of alluvial valley floors. This results in eliminating the applicability of Section 515(b)(10)(F) of the Act to "alluvial valley floors" that might otherwise exist east of the 100th meridian. However, surface coal mining and reclamation operations, no matter where conducted, must meet all of the other provisions of Section 515(b)(10).

A definition of half-shrub has been proposed. It appears in sections 816.117 and 817.117 in the context of revegetation, particularly in the West. It is not a commonly used term and, therefore, is proposed to assure uniform usage. The source for the definition is: American Society of Range Management, 1964, "Glossary of Terms Used in Range Management."

The term "coal exploration operation" is proposed to be specifically defined in these regulations, because it is not so defined in the Act, except for the indication in Section 701(28) of the Act that it is not within the category of activities constituting "surface coal mining operations." The basis for the proposed definition is the definition adopted for "exploration" under the Department's regulations covering coal mining on Federal lands, 30 CFR Section 211.2(m), with minor changes in wording to adjust that definition to activities subject to regulation under the Act.

The term "substantially disturb" is proposed to be defined because it is not specifically defined in the Act. The basis for the definition is the list of types of exploration activities, at the end of Section 512(a) of the Act, for which Congress instructed the Secretary to promulgate environmental protection performance standards. In addition to that list, the Office has added blasting and the disposal of earth or other debris. The disposal of earth or debris is proposed to be included within the term "substantially disturb" because of the potential adverse pollution of these activities, if not safely conducted. *Compare:* Sections 515(b)(4), (5), (10), (11), (13), (14) of the Act.

The Office has considered the question of whether the terms "coal exploration operation" and "substantially disturb" should be proposed to exclude specifically cases where persons enter upon lands underlain by coal deposits to conduct scientific research or where very small amounts of coal are removed by hand tools and access to the area is obtained by foot or by limited use of an existing road or other access route. After consideration, the Office has decided not to propose such exclusions, because it is believed that Congress authorized no categorial exemptions from activities otherwise covered by Section 512 of the Act.

Regarding scientific researchers, the Office notes, to the extent that a person conducts only scientific research which is not related to specific plans to locate and describe coal deposits, such research is not within the purview of the term "coal exploration operation," and therefore not subject to Part 776. Where a person conducts "coal exploration operations" which do not "substantially disturb" the land involved, that person will not be subject to the provisions of Part 776 or Part 815.

The Office emphasizes, however, that the definitions proposed for the terms "coal exploration operation" and "substantially disturb" are only tentative and specifically solicits comments about how to define these terms in the final regulations. In particular, the Office is interested in the receipt of comments regarding the duration and total number of coal exploration operations conducted on private lands, the nature of the entities that perform these operations, the magnitude of adverse environmental harm caused by these operations and the prior experience of the States in regulation of those operations.

A "complete Federal program" is a program established under Section 504 of the Act. It may be established if a State does not submit an acceptable State program or upon the complete withdrawal of a State program under Part 733. This program is the way that the Director regulates all coal exploration and surface coal mining and reclamation operations on non-Federal and non-Indian lands within a State.

A "partial Federal program for a State" is a program established by the Director under Section 504 of the Act upon the partial withdrawal of a State program and by which the Director may regulate appropriate portions of coal exploration and surface coal and reclamation operations on non-Federal and non-Indian lands within a State. The complete and partial Federal programs are to be distinguished from the substituted Federal enforcement of a State program. The Federal programs require more specific procedures and opportunity for public input while the substituted Federal enforcement of a State program is a more expedited procedure with potentially more limited coverage.

The land-use categories defined in Section 701.5 denote the broad use or activity and to a lesser extent the intensity of use or management as it may effect the hydrologic cycle. A land-use change from one land-use category in the premining stage to a different category in the postmining stage constitutes an alternative land use and the permittee must meet the requirements for approval of an alternative post-mining land-use. The Office tentatively selected these categories primarily to insure that (1) the range of agricultural or other nonurban uses will be identified, and (2) the relationship of use intensity and coverage or degree of disturbance of the site will be reflected in the categories.

Recognizing that (1) these categories may be in direct conflict with State or local planning and zoning *e.g.* apartment housing and industry in same category, and (2) it is difficult to develop and document definitional criteria that link land-use categories with effect on hydrologic cycle, the Office did consider other alternative land-use categories. The two primary alternatives include:

1. Land-use categories that are compatible with those traditionally used in State and local planning and zoning documents, including industrial, commercial, residential, agriculture, recreation, forestry, historic preservation, public activities, and grazing; the principle advantage of these categories is that they are the same as those used on approved zoning plans; and

2. Categories that combine both land use and land cover; this alternative could emphasize the agricultural variation in greater detail, such as: cropland, cultivated crops, rangeland, forestland, hayland, pastureland, heavy industry, light industry, public services, residential, impoundments of water, and fish and wildlife habitat and recreation lands; the principle advantage with these categories is that they more closely follow the categories used by Federal agencies who gather land-use and land cover data.

In view of the variation between alternative land-use categories and the importance of these definitions, the Office solicits comments regarding the proposed land-use categories in Section 701.5.

The definition of "performance bond" was developed to meet several goals. The first is to refer to the instrument itself as an indemnity agreement. An indemnity agreement is a legal term of art relating to the guarantee by a party of its promise to do some obligation and, if it fails to do so, to pay a sum of money that is equivalent to the performance of the obligation. In addition, it is always desirable to improve that indemnity agreement with additional guarantees, which leads directly into the various kinds of bonding that might be acceptable under a bonding program. The first acceptable kind of bond would be a bond supported by a surety company's guarantee or agreement to pay the money that is viewed as the equivalent to the performance of the obligation. The second kind of bond is a pledge of collateral or property. In this case, acceptable collateral is either cash negotiable certificates of deposits or public bonds where the regulatory authority will have actual possession and control of such collateral in order to guarantee either the performance by the permittee or that source of money will be available for the regulatory authority itself to complete the obligation. The third kind of potential indemnity agreement contemplated under the Act is the self-bond provision which relates within the definition to the language for other acceptable contractual guarantees. This self-bond concept is discussed in greater detail in the preamble to Subchapter J, but essentially it is an indemnity instrument directly from the permittee pledging to pay a certain sum of money if he fails to comply with the obligations imposed upon the bond instrument. The self-bond agreement is by its nature not supported by a separate surety's guarantee or a pledge of collateral.

This definition also acknowledges that the proposed requirements of this chapter relating to performance bonds for coal mine operations is applicable not only to the Federal regulatory authority should the Federal government have to directly enforce the provisions of the Act, but it is also applicable through an approved State regulatory program which is supported by State law and State regulations. It is necessary that these proposed minimum criteria for bonding of coal mine operations be applicable to both the Federal government in its status as a regulatory authority and to States in their status as regulatory authorities pursuant to approved State programs.

The language in the definition of performance bond relating to faithful performance of the Act, the regulations of this chapter, approved State programs, rules and regulations promulgated thereunder, and the provisions of a permit is intended to recognize the different sources of legal authority that allow full implementation of the regulations of this Subchapter. This phrase will appear throughout these regulations.

The definition of "prime farmland" in Section 701.5 makes reference to the criteria as prescribed by the Secretary of Agriculture as published in the FEDERAL REGISTER on January 31, 1978. Technical literature relied on for the prime farmland definition is:

1. Schmude, K. O., 1977, A perspective on prime farmland. J. Soil and Water Cons. Vol. 32, No. 5, pp. 240–242.

2. United States Department of Agriculture 1978. Soil Conservation Service. Prime and unique farmlands. 7 CFR, Part 657, 43 F.R. No. 21, January 31, 1978.

The definition of prime farmland relates to Sections 507(b)(16), 515(b)(7) and 701(20) of the Act. The prime farmland definition, as required by the Act, is to be used along with the historical use clause in identifying prime farmland relative to these regulations. The intent of the Act is to consider the prime farmlands that have been used for intensive agricultural purposes. The term "cultivated crops" encompasses the definition of intensive agricultural purposes.

The term "historically used for the production of cultivated crops" would be defined as cultivated crop production in 5 or more of the 20 years preceding the surface mining permit application. The 20-year period corresponds to farm mortgage financing. The Office proposes a 5-in-20-year criterion to include land used for cultivation in a long-term crop rotation. For example, lands used as part of a crop cycle for 1 year of row crop out of every 4 years would be covered if that were the practice for the previous 20 years. This is a common practice in midwestern States, in particular, where lands have been historically used for intensive agricultural purposes but, due to crop rotation, land sometimes lies fallow for several growing seasons. Moreover, land which otherwise would be prime farmland should not be excluded from coverage of the Act merely because of sound agricultural use of the land which requires crop rotation to allow the land to regain its prior productivity.

The Office notes that the coal industry commenters on the initial program agreed that historic intensive agricul-

tural use of the lands must be considered but recommended a time-frame for defining such intensive use within the range of 10 to 20 years to 16 to 20 years preceding the date of the permit application. These proposals fail to consider land which would clearly be prime farmland except for crop rotation to allow land to regain its prior productivity. Commenters are invited to propose an alternative scheme which would address this aspect of prime farmland historic use.

The terms "applicant," "permit," "permittee," "reclamation," and "surface mining activities" would be defined consistent with the generally accepted meaning as used in Federal regulations. The terms "auger mining," "topsoil," and "hydrologic region or cycle" are as defined in A Dictionary of Mining, Mineral, and Related Terms published by the U.S. Bureau of Mines in 1968. The terms "coal processing plant," "in situ processing," "precipitation event," "rangeland," and "steep slope" are defined consistent with the generally accepted usage. "Anthracite" would be defined as listed in the Annual Book of ASTM Standards.

The following terms were defined to reflect the intent and conditions of the Act: Approximate original contour, downslope, imminent damage to the health and safety of the public, macro-invertebrate biological community, materially damage water quality or quantity, reference areas, and significant imminent environmental harm to land, air or water resources.

"Special bituminous coal surface mines" would be defined to reflect the language of Section 527 of the Act and its legislative history. H. Rep. No. 95-218, 95th Cong., 1st Sess. 70, 127, 177 (1977); H. Rep. No. 94-45, 94th Cong., 1st Sess. 117 (1975); S. Rep. No. 94-28, 94th Cong., 1st Sess. 222-223 (1975); H. Rep. No. 93-1522, 93rd Cong., 2nd Sess. 86 (1974).

The term "best technology currently available" is utilized in two contexts in the Act. First, under Sections 515 (b)(10)(B)(i) and 516(b)(9)(B), surface and underground coal mining operations are to be conducted to the extent possible using the "best technology currently available" to prevent additional contributions of suspended solids in excess of requirements set by applicable State or Federal law. To the extent that applicable State or Federal laws (effluent limitations for example) are more stringent than currently available technology, the technology must improve equivalently to allow such surface coal mining operations. In this sense, Sections 515(b)(10)(B)(i) and 515(b)(9)(B) are technology forcing.

Second, under Sections 515(b)(24) and 516(b)(11), surface and underground coal mining operations are to be conducted using the "best technology currently available" (BTCA) to minimize disturbances and adverse impacts of the operation on fish, wildlife and related environmental values and achieve enhancement of such resources when practicable.

The proposed definition of "best technology currently available" incorporates the technology forcing aspect of the term. It also defines technology to include more than hardware. For example, techniques and procedures have been included to authorize phasing of mining and reclamation operations. The definition also divides responsibility for determining BTCA between the Office and the state regulatory authority.

The terms "affected area" "permit area," "mine plan area" and "adjacent area" would be defined in connection with each other and should be read together. They are important for purposes of the area coverage of plans and data to be submitted with permit applications, bonding, application of the performance standards and enforcement. The "affected area" would represent a dynamic area, expanding from the lands first disturbed by operations within a permit area to include ultimately all areas disturbed within a permit area or series of permit areas, prior to bond release, covering the life of the mine. Affected area would never include a greater area than covered by a permit or series of permits for the life of the operation.

"Permit area" would be that area specified by a person in his application for a permit. It would include the lands subject to mining operations during the life of the permit. The term of the permit would have a bearing on the size of the permit area. Shorter permit terms generally would mean smaller permit areas.

"Mine plan area" is proposed as the area which a person expects to mine during the life of the operation. The mine plan area could coincide with the initial permit area for a small operation when the life of the mining operation would coincide with the term of the initial permit. For larger operations expected to continue for many years, the mine plan area would be considerably larger than an individual permit area. In such circumstances, the mine plan area concept is important in terms of plans and data to be submitted with the permit application. The regulatory authority would need the plans and data for the lands to be mined during the life of the operation in order to make an informed decision on the permit application.

Generally speaking, "adjacent area" in the context of mining operations would mean the variable size area surrounding the affected area which could be impacted by operations on the affected area. The adjacent area would extend for varying distances from the affected area depending upon whether impacts to air, surface water, ground water, wildlife or other elements are being considered. In terms of plans and data to be submitted with permit applications, adjacent area would be the variable size area surrounding the mine plan area. The size of the adjacent area would depend upon whether plans and data relate to effects of mining on air, surface or underground water quality or quantity, wildlife, cultural resources or other elements.

§ 701.11 Applicability.

For surface coal mining and reclamation operations during the permanent program, the permit provides the triggering device for application of the performance standards. Subsection (a) of this section would repeat the requirements of Section 506(a) of the Act for obtaining permits.

Subsection 701.11(b) would require the performance standards in Subchapter K of Chapter VII to apply to surface coal mining and reclamation operations on the earliest date on which such operations should have a permit. This would be eight months after approval of a State program or implementation of a Federal program, except as provided in Subsection 701.11(a) when a permit application has not been acted upon by the regulatory authority. Subsection (b) proposes that the performance standards would apply to surface coal mining and reclamation operations on the date on which a person should have obtained a permit under these regulations, whether or not that permit had been obtained. Thus, a person attempting to conduct a wild-cat operation without obtaining a permit would nevertheless be subject to the performance standards in Subchapter K. Failure to comply with them would constitute a violation of the regulations, just as failing to obtain a permit would constitute a violation.

Subsection 701.11(c) would provide that the notice or approval requirements for coal exploration operations proposed under Part 776 of Subchapter G go into effect upon approval of a State program or implementation of a Federal program. Because both Section 512 of the Act and the legislative history are silent on the effective date for its requirements, the Office has decided to adopt the applicability and time requirements established by the Act for permits. This provides reasonable time for persons with ongoing coal exploration operations to file the necessary notice or application for approval.

The Act provides no guidance concerning when applicable performance standards should begin to apply to coal exploration. Because most coal exploration operations are considerably smaller than a typical surface coal mining operation, the Office believes a reasonable approach would be to apply the applicable performance standards to existing operations two months following approval of a state program or implementation of a Federal program. This approach is within the general rulemaking authority to carry out the purposes of the Act and consistent with these purposes as found in Section 102 of the Act.

PART 707—EXEMPTION FOR COAL EXTRACTION INCIDENTAL TO GOVERNMENT FINANCED HIGHWAY OR OTHER CONSTRUCTION

This Part would establish the minimum criteria and procedures for notifying the regulatory authorities of those operations extracting coal as an incidental part of Federal, State or local Government-financed highway or other construction which are exempt from the requirements of the Act. The regulations limit the scope of the exemption in a manner believed to be consistent with the congressional intent of Section 528 of the Act, and consistent with the overall philosophy of the Act to minimize the environmental impacts and the risks to the public health and safety of surface coal mining operations.

The regulations would insure that only those operations extracting coal incidental to Government-financed construction would be exempt from reclamation requirements of the Act.

Section 528(3) of the Act provides the authority for these regulations. That Section specifically requires that the exemption for coal extraction which is an incidental part of Federal, State or local Government-financed highway or other construction be covered by regulations issued by the regulatory authority. The regulations in Part 707 establish the minimum criteria and procedures.

Relevent legislative history supporting these regulations includes:

(1) H.R. 5988, 93d Cong. Section 203;

(2) 119 Cong. Rec. 1368 (January 18, 1973, discussing Section 203 of H.R. 5988);

(3) S. Rep. No. 93-402, 93d Cong., 1st Sess. 50 (1973);

(4) S. Rep. No. 94-28, 94th Cong., 1st Sess. 223 (1975);

(5) S. 7, 95th Cong., 1st Sess., Section 428(3) (1977);

(6) S. Rep. No. 95-128, 95th Cong., 1st Sess. 98 (1977);

(7) S. Rep. No. 95-493, 95th Cong., 1st Sess. 112 (1977);

(8) A May 11, 1971, memorandum from David C. Simms, P.E. Deputy Chief Highway Engineer, Department of Transporation, Commonwealth of Pennsylvania, to Central Office, Engineering Districts, Engineering Consultants, on the subject of drainage from acid producing bituminous coal seams—policy and procedures (with attachments).

Sections 707.1, Scope, and 707.2, Objectives, set forth what this part is intended to achieve. The conditions under which extraction of coal may be exempted from all requirements of the Act are stated.

The conditions are:

(a) The value of the coal recovered must be less than 50 percent of the cost of the project;

(b) The boundaries must be precisely defined and must not be larger than necessary to accomplish the project;

(c) The financing must involve over 50 percent government funds;

(d) The contractor for the project must follow the rules, regulations and guidelines of the government financing body or agency with regard to environmental protection; and

(e) The financing government agency will notify the regulatory authority of each construction project and include the following specific information:

(i) Amount of government financing,

(ii) The project boundaries,

(iii) The value of the coal to be removed, and

(iv) The agency requirements being followed by the contractor to protect health, safety, and the environment.

Under these conditions, the Congressional intent of this exemption would be satisfied. Significant environmental or social costs of coal extraction would be internalized through reclamation requirements applicable to the government-financed construction.

The legislative history is clear that Congress intended the Section 528(3) exemption to be a narrow one, as established by regulations. The third exemption was not added to Section 528 until the 95th Congressional Committee reports from earlier Congresses stated that exemptions one and two in Section 528 were provided because those classes of surface mining in those exemptions caused very little environmental damage and regulation of them would be burdensome for the regulator and the industry (3) (4). When the third exemption was added in the Senate during the 95th Congress, the Committee continued to use the same language for all three exemptions (6). However, the third exemption added by the Senate was not limited to incidental coal extraction (5). The Conference modified the Senate language to "limit(s) the exemption to extraction of coal as an incidental part of government-funded construction only, rather than all construction as originally provided in the Senate language." (7)

The origins of Congressional thinking on this subject can be found in H.R. 5988 (1)(2). The exemption was noted as being patterned in some ways after Pennsylvania law. Excavations and right-of-way cuts were exempted where Federal, State or local government requires reclamation of the affected area. The Congressional Record summary of the exemptions stated: "The Secretary may identify other activities not subject to the Act and issue regulations further defining the exempted activities taking into consideration their magnitude (in tons and acres) their potential environmental impact, and whether the class, type, or types of activity are already subject to existing Federal, State or local regulatory systems. In identifying and defining other exempted activities, the Secretary is expected to follow a rule of common sense. The purpose of the Act is to insure that social and environmental costs of surface mining are internalized by reclamation. Any activity which inflicts significant costs and which should be accompanied by reclamation should, of course, not be exempted."

"The extraction of coal incidental to certain government-financed construction can be a major project with potential for significant public health and safety and environmental impacts. For this reason, all such extraction cannot be exempted from the Act and these regulations, unless it will be subject to reclamation requirements imposed by the government financing agency. This has been recognized in Pennsylvania."

"The proper handling of situations resulting from the construction of highways through bituminous coal areas will contribute to the elimination of pollution produced in the highway cut section and discharged to the streams of the Commonwealth. This discharge enters local streams through the highway drainage system, disturbs the existing environmental conditions, and produces detrimental effects which must be considered a major problem."

"In order to comply with the intent of existing laws and regulations regarding pollution from bituminous coal seams, this Department has obtained a Bituminous License, a Bituminous Strip Mine Permit and a Mine Drainage Permit on a state-wide basis. Since it is impossible in highway construction to follow the requirements intended solely for the strip mine operator set forth in the laws, it has become necessary to formulate policy and procedures to cope with the problems resulting when encountering bi-

luminous coal seams both in the early phase of design and in the early phase of highway construction. This policy and procedure has been developed in cooperation with the Pennsylvania Department of Environmental Resources, and strict compliance with these procedures will be the responsibility of the contractors during construction."

Contractors conducting government financed construction would be required to have a copy of the government financing agency notification at the site of the coal extraction. This is needed so that regulatory authority inspectors will know that a particular operation is exempt from the regulations of the regulatory authority.

Section 707.5 contains the definitions unique to the terms as used in this Part. They are intended to fulfill the Congressional intent to limit carefully the scope of this exemption.

"Government-financed construction" would be defined in such a way as to exclude from the meaning of that term any government financial contributions to a construction project which are relatively insignificant when compared to the overall construction costs. The government financing agency contribution has been set at greater than 50 percent in order to exempt only those projects in which the government agency has a significant interest. Other indirect means of assistance for construction projects that, do not give the government financing agency a direct and significant interest in the ultimate success and utilization of the construction project, are also excluded from the definition. This definition would minimize the opportunity for abusing this statutory exemption by preventing a person from qualifying for the exemption when the government agency's financial contribution or interest in the project is insignificant.

Section 707.11 specifies the information which would have to be included in the notice of the government financing agency's to the regulatory authority for each construction project. The information is necessary for the regulatory authority to know the scope of the construction project and whether it qualifies for exemption from the Act and the regulations in this Chapter.

The notification requirements are intended to be the minimum information necessary for the regulatory authority to know that the construction qualifies for the exemption. The notification is not intended to be lengthy or burdensome.

Alternative approaches to that now proposed in this part were considered. One alternative approach would require persons conducting coal extraction as an incidental part of government-financed construction to apply to the regulatory authority for an exemption. The person would be required to show that the coal extraction qualified for the exemption because the impacts on public health and safety and the environment were minimal or internalized by requirements imposed by the government financing agency. Another alternative considered was to require the government financing agency to obtain an exemption agreement from the regulatory authority covering all construction projects it financed. The exemption agreement would apply existing agency requirements on terms and conditions negotiated with the regulatory authority to construction, in order to accomplish the purposes of the Act. These approaches were rejected for the proposed rules because the Office believes the purpose of the Act and Congressional intent are better served by a project-by-project notification system which does not require approvals or agreements with the regulatory authority.

Most comments received on the preproposed draft of Part 707 took the position that the Office lacked authority to issue the part, that it went beyond the Act or that it was too burdensome given the nature of the exemption in Section 528(3) of the Act. The Office has carefully considered these comments. The requirements in Part 707 as proposed differ significantly from the draft upon which the comments were based. Because Section 528(3) specifically provides for regulations to implement that exemption, the Office believes that it has ample authority to issue regulations as proposed in Part 707. The regulations now proposed for Part 707 do not extend beyond the authority of the Office, given the purposes of the Act expressed in Section 201 and the Congressional intent behind Section 528(3). In response to the expressed concern about the burden imposed, this proposed rule has tried to reduce the burdens to a minimum, consistent with the need to insure that exempted operations internalize the environmental and public health and safety costs.

SUBCHAPTER C—PERMANENT REGULATORY PROGRAM IN STATES

Subchapter C proposes requirements for permanent regulatory programs in States. State and Federal Programs for States are grouped together in this subchapter in order to identify the required progression from the initial program established by Section 502 to a permanent Federal or State program. Subchapter C identifies procedures for the States and Office to follow in order to submit, review, approve or disapprove, maintain, revise and amend permanent State programs. Subchapter C also identifies procedures for the Office to follow to evaluate State programs and to Federally enforce State programs or withdraw approval of State programs and implement Federal programs in their place. The grant procedures available to develop and maintain programs are included here and remain unchanged from those previously adopted by the Secretary (42 F.R. 62639; December 13, 1977).

PART 730—GENERAL REQUIREMENTS FOR REGULATORY PROGRAMS IN STATES

Section 730.3 proposes general responsibilities for permanent regulatory programs as implemented by the States, the Regional Director, the Director and the Secretary. Submission, review and approval responsibilities are discussed as well as responsibility to maintain programs and to revise and change programs.

Section 730.5 contains definitions of key terms which are used throughout the sections concerning State programs. Section 730.5(a) defines "consistent with" to mean that rules and regulations adopted by the State to implement the provisions of the Act must be the same as or similar to the regulations promulgated under the Act and must achieve the same regulatory result. Consistent with is used in the State program regulation to indicate areas where the State program regulations may vary from those of the Secretary but must still meet the standard prescribed in the Act and the Secretary's regulations. Section 730.5(b) defines "in accordance with" to mean that State laws to implement the provisions of the Act shall be in agreement with and no less stringent than equivalent provisions of the Act. The proposed regulations use "in accordance with" to require that certain areas of State programs duplicate both the standard and the method of achieving the standard as prescribed in the Act and Secretary's regulations. These definitions are used specifically in Part 733 to establish criteria for approval or disapproval of State programs.

Section 504(a) of the Act requires the Secretary to implement a Federal program in a State no later than June 3, 1980 should the State fail to establish a State program. Proposed Section 730.12 requires that a State or Federal program be adopted no later than June 3, 1980 when surface coal mining and reclamation operation are carried out in a State. The Office is aware of several States in which mining is not now occurring but likely to occur in the near future. The Office encourages those States with extractable coal reserves that are not presently being mined to determine whether mining is

likely in the near future and, if so, to propose a State program early enough so that the program can be established prior to mining. Proposed Sections 730.12 and 731.12(c) allow States to submit programs at a later date as they become aware of proposed mining operations, or, in the alternative, to insure that a Federal program for such States will be implemented.

PART 731—SUBMISSION OF STATE PROGRAMS

Part 731 is intended to establish procedures and requirements for the States to follow in order to submit a State program. State programs will not include regulation of mining on Indian lands. Part 731 also details the content requirements for a program submission.

Section 731.12(a) requires that States submit 3 copies of the proposed program to the Regional Director on or before February 3, 1979. Three copies are required, one for the Office in Washington, one for the Regional office and one to be made available for public inspection. February 3, 1979 is established in Section 503(a) of the Act and program submissions must be made by that date. Earlier versions of the regulations required States to submit programs in a form acceptable to the Office. That requirement was deleted from the proposed regulations. However, there will be a need to reproduce copies of the submission and States should prepare the submission in a reproducible form.

States may petition for an extension of time beyond February 3, 1979 under Section 731.12(b) of the proposed regulations if it is necessary that their legislature act to allow them to submit a proposed State program. This requirement is authorized by Section 504(a) of the Act. The States are required to petition for assumption of responsibility following State's legislative process towards adopting the necessary statutes and regulations under section 731.12(c).

The States are required under Section 731.12(d) to keep sufficient copies of the program to permit public inspection under Section 732.12(a).

Proposed Section 731.13 is proposed to permit the States to request variations from the regulations of this Chapter in order to develop regulatory programs to fit the specific circumstances of each State. This section was developed in response to comments on the draft regulations which showed a need to clarify the extent of variation to be allowed. Variation from the Secretary's methods of achieving standards as contained in the regulations will be acceptable both for achieving performance standards pursuant to Subchapter K and in the systems and procedures that make up the program With regard to performance standards, variation will be approved for the method of achieving the actual standard. Systems and procedures include such areas of a program as permitting, bonding, and inspection. However, no leeway will be permitted in achieving the results and standards specified in the Secretary's regulations. With regard to program systems and procedures, criteria for acceptable variances are closely tied to the requirements contained in the Act. In all cases, variances in the methods of meeting the purposes of the Act will be compared to the regulations developed by the Secretary. The variance proposed must be at least as effective in meeting the purposes of the Act as the approach contained within the Secretary's regulations. The variances must be based on characteristics of a particular State. No variance will be approved unless the State also submits detailed information and analysis that will enable the Office to determine that comparable effectiveness can be achieved.

The proposed regulations under Section 731.14 require all information specifically mentioned under Section 503(a) (1) through (7) of the Act and in addition require that supplemental program information be included in a program submission. The Office believes that the supplemental information is necessary to satisfy Section 503(a) of the Act which requires that the State demonstrate its capability to carry out the provisions of the Act. The Act specifies additional criteria in section 503(b)(4), for approval of a State program, including findings that the State has the legal authority and qualified personnel necessary for the enforcement of the environmental protection standards.

Alternatives to requiring the level of detail requested in proposed Section 731.14 range from requiring nothing more than that required in Section 503(a) of the Act to requiring States to undertake costly studies that project future mining demands for the State. Such studies might prove useful in documenting future program needs. Another alternative considered was to require States to obtain a program management analysis to document program efficiency and program structure.

Section 731.14 as it is proposed should provide the Regional Director, Director and the Secretary sufficient information to make the decision to approve or disapprove the program submission as required under Section 732.13. The drafters of this regulation feel that the detail required provides no more information than needed to approve, or disapprove based on criteria listed in the Act.

Sections 731.14 (a) and (b) require State program submissions to include copies of State laws and regulations. The laws and regulations should address each applicable segment of the Act and the regulations of the Secretary. In reviewing the State's laws and regulations the Office will establish a cross index to be sure that each provision of the Act and the Federal regulations is addressed in the State program.

731.14(c) requires the States to submit copies of other laws and regulations directly affecting coal surface mining. Inclusion of other laws and regulations should alert the Office and the State to potentially conflicting State laws and regulations which may cause problems during enforcement of a State program. The Office has encountered several instances of this problem during the initial regulatory program.

The State is required under proposed 731.14(d) to submit a legal opinion of the State Attorney General addressing the State's legal authority to carry out the program. An alternative to this requirement would be to rely on Interior's Solicitors to determine the State's authority. The Office feels that the State Attorney General is in a better position to render this opinion. Proposed Section 731.14(d) also requires the State Attorney General to explain differences between the State laws and regulations and the Act and Secretary's regulations. This requirement should assist the Office in evaluating the State's authority.

Proposed Section 731.14(e) requires the state to submit a copy of the order or statute that authorizes the State to carry out the State program and to administer program grants. Such a designation is required under the grants section of the regulations in Part 735 (previously issued as Part 740). In most cases a grant under Part 735 will directly follow approval of a State program. The designation has, therefore, been required along with the State program submission.

A chart or table of organization of the regulatory agency and other agencies involved in the State program is required under proposed Section 731.14(f). A chart is necessary for the Director to evaluate the mode of operation of the program and thus to assist the Secretary in determining whether to approve or disapprove the program. The chart will be especially useful for the Director and Secretary to determine adequacy of the program in meeting all aspects of the Act in terms of projected workload and time constraints imposed by the Act.

Copies of supporting agreements between the regulatory authority and any other agencies which the regulatory authority must depend on are re-

quired in proposed Section 731.14(g). The Office must be assured that roles to be played by other agencies are firmly established and are adequate to the extent relied upon to implement the intent of the Act.

Proposed Section 731.14(h) asks the States to submit narrative descriptions and flow charts for each of the required systems and processes that make up the State program. These descriptions and flow charts will enable the Office to determine the State's capability to implement, administer and enforce the Act. An alternative to requiring detailed descriptions and flow charts would be to require a statement by the State that the State had the systems and procedures necessary to implement, administer and enforce the Act. The Secretary must evaluate the applicability and efficiency of the State systems proposed to be used before he can approve the Program. Without detailed descriptions, such evaluation would not have an adequate foundation and the Secretary's final determination would amount to little more than a subjective belief in a certain State's ability or inability to manage the program.

Proposed Section 731.14(i) requires the States to submit statistical information describing coal mining operations in the State. This information is necessary in order to determine the actual regulatory demand placed on the proposed State program. Past mining statistics are required in order that the Office and the State establish a relationship between program size and number, and size of operations. As an alternative the Office could obtain this data on its own. However, it is important that the State establish mining trends in the State for use in projecting future program needs. Future projections are requested only if they are available through existing studies. The Office does not intend that a State undertake costly new studies to comply with this requirement.

Proposed Section 731.14(j) asks the State for a summary table of existing and proposed program staff. The table should include the entire program staff showing job functions, titles and job experience and training for professional and technical positions. This table will assist the Office in evaluating the overall program. No information is requested for and no assessment will be made of individual employees.

Proposed Section 731.14(k) requires the State to describe how the staffing for the proposed program will be adequate to carry out the projected work loads. The State should address timeliness of required functions under the Act. Descriptions should be included of how the staff inspectors will perform the required number of inspections and how the permitting and technical staff will process and evaluate anticipated applications for permits.

A map showing office locations for the regulatory authority and other involved agencies is required under proposed Section 731.14(l). The State program should be accessible to mine operations and the public affected by mining.

Proposed Section 731.14(m) asks for an explanation of projected use, if any of professional and technical personnel available to the regulatory authority from other agencies. The Office does not promote State programs that are made up with staff from many different agencies. However, in some States with small programs, it will be reasonable for the regulatory authority to employ certain professional and technical personnel from other agencies for functions under the State program. This is especially necessary for States that do not project sufficient workloads to justify fulltime personnel in technical areas. The Office does not envision approval of a State program if the functions of inspection and enforcement are handled by staff other than the regulatory authority staff. Inspection and enforcement must be incorporated within the regulatory authority.

The States are required in proposed Section 731.14(n) to describe the budget for the past year, the present year and the projected budget under an approved State program for the next two years. Budget projections at this stage should allow the Office to properly allocate proposed Federal grants.

Physical resources, including vehicles, office space, laboratories and equipment must be described pursuant to proposed Section 731.14(o). Physical resources will make up an important part of a State program and will provide the Office and the Secretary with information to be used in evaluating the adequacy of the proposed program.

The State is required under proposed Section 731.14(p) to describe, in a narrative form, actions which over the past three years regulated surface coal mining, including a description of the type of enforcement actions available to the regulatory authority and how those actions were utilized. The narrative should also demonstrate actions toward implementing the initial regulatory program under the Act. The reason for requiring this information is inherent in the Act that establishment of a permanent program in a State be considered a two-part process. The initial program as provided in the Act precedes the permanent program and offers the State an opportunity to demonstrate its effectiveness and capabilities in implementing and administering certain provisions of the Act. The Office does not intend to use this information regarding initial program experience in a negative manner but rather to determine a trend towards effective implementation of the requirements affecting surface coal mining and reclamation operations.

Proposed Section 731.14(q) requires a description of special environmental protection performance standards of the State for regulation of anthracite coal mining. Section 529 of the Act provides for separate regulations for anthracite coal mining in a State if the State was regulating anthracite mining on August 3, 1977.

731.14(r) asks the State to describe other programs administered by the regulatory authority. Other programs could be those that interfere with effective implementation and administration and enforcement of the State program. Another reason for identifying other programs of the regulatory authority is so that staff with duties in addition to duties under the Act or program can be properly apportioned in order to meet the requirments of grants pursuant to Section 735. States should attempt to avoid assigning other functions to those assigned to implement and enforcement of the State program under this Act. The Secretary will not approve proposed programs that do not provide the State with sufficient staffing to carry out the provisions of the program. The State submitting a proposed State program should utilize the requirements under Part 731 to provide the Office with a complete picture and description of the State staff and State procedures that will enable the State to regulate coal exploration operations and coal surface mining and reclamation operations in the State according to the Act. Each State program will be different in order to reflect the size and number of mining operations and regional variations and differences.

PART 732—PROCEDURES AND CRITERIA FOR APPROVAL OR DISAPPROVAL OF PROGRAM SUBMISSIONS

Proposed Section 732.11 provides for a review of the program submission by the Regional Director to determine whether the submission is complete. "Complete" is defined to mean that the submission contains all the elements required by Section 731.14 of the regulations. If the Regional Director determines that one or more elements are missing he will be directed to identify the missing elements and return the program to the State. This early review is intended to prevent OSM from performing lengthy and time consuming reviews of incomplete submissions. Incomplete submissions

will not be eligible for approval by the Secretary.

Proposed Section 732.11 also requires the Regional Director to publish notice in the FEDERAL REGISTER that he has received a program submission and that the process of review for completeness is open for public participation. These more formal public review procedures during the review for completeness announce an end to the period of informal discussions between the State and the Office concerning the development of the program which will occur during State program development. From the time of submission on, the process leading to approval or disapproval proposed in the regulations shall be open to all parties and preclude exparte communication.

The Office intends to meet with States early and assist them in developing and submitting complete and adequate programs. These early sessions should assist States in that effort. The proposed procedures stem from the fact that the review and subsequent approval of a State program is considered Federal rulemaking.

Section 732.11(c) provides the State 30 days in which to make changes and additions to submissions which have been returned as incomplete. The States may return the submission to the Regional Director for review. Earlier drafts provided the State 60 days to respond. However, this period is not provided in the Act and seriously affects the State and Office's ability to implement a program as required on or before June 3, 1980. The States should be aware however that Sections 504(a) and 503(c) of the Act, requires the Secretary to implement a Federal program should the State fail to resubmit a State program that has been disapproved. Incomplete submissions once rejected must be considered the same as disapproved programs and the State must resubmit within 30 days in order to keep the Office from initiating a Federal program. The Office recognizes that some incomplete submissions will lack only minor items. These may be submitted after the 30 days allowed up to February 3, 1979 or August 3, 1979, if time for submission is extended under Section 731.12(b) of this subchapter. The Office is interested in comments from the States regarding the provision of an early determination by the Regional Director for completeness of a program submission and the provision for public participation in that review process.

Proposed Section 732.12 requires the Regional Director to hold a public hearing on the submitted program. The public hearing is required by Section 503(b)(3) of the Act.

Section 732.12(b)(1) proposes that the public hearing format and rules of procedure be determined by the Director. Section 732.12 also provides for public review of the submitted program and for public comment period. Section 732.12(c) requires the Director to compile written comments, hearing transcripts and exhibits and forward them to the Secretary along with a recommendation that the Secretary approve or disapprove the State program. The objective of this proposed rule is to insure meaningful public participation in the development of a State program. The Office believes that such public participation is a clear intent of Congress.

Section 503(b) of the Act requires the Secretary to render a decision approving or disapproving the program submission. The Secretary is required under proposed Section 732.13 to consider all relevant information including information obtained from the public hearing and public comments. Section 732.13(b) establishes that approval shall not be granted until the Secretary has obtained concurrence from the Administrator of EPA and until he has solicited and disclosed the views of the EPA and the Department of Agriculture. These requirements follow Section 503(b) (1) and (2) of the Act.

Proposed Section 732.13(a) allows the Secretary to approve or disapprove the program in whole or in part as provided in Section 503(b) of the Act. However, approval in part by the Secretary does not establish a State program for the part approved. Approval in part simply provides assurance to the State that part of the State program is determined acceptable and need not be revised or altered. The remainder of the program must be completed or revised and approved before authority to regulate surface coal mining under the Act is transferred to the State.

Section 732.13(c) requires the Secretary to include findings for his decision and to transmit the findings to the State. This requirement is taken from Section 503(b)(4) of the Act which requires a finding for a portion of the decision. In addition, in the case of disapproval by the Secretary findings are required under Section 503(c) of the Act.

Section 732.13(d) requires the Secretary to issue his decision within 180 days from the date that the Regional Director received a complete program submission. The Act in Section 503(b) allows 6 months for the review after the date that the program was submitted.

The Secretary is required under proposed Section 732.13(e) to publish all decisions approving or disapproving a program in the FEDERAL REGISTER. Public notice is required because the process of approving a State program is considered a Federal rulemaking process and this requirement assures that the public is provided notice of the Secretary's decision.

Proposed Section 732.13(f) provides that a State whose program is disapproved in whole or in part shall have 60 days to submit a revised program. The Secretary is given 60 days in which to approve or disapprove the revised program submission. The revised program is submitted to the Director. Proposed Section 732.13(f) requires the Director to publish the revised submission contents in the FEDERAL REGISTER and provide time for comments. The Director evaluates the revised program submitted and considers comments received and recommends approval or disapproval to the Secretary. The Secretary then issues his decision and publishes it in the FEDERAL REGISTER.

The decision disapproving this revised program is considered the final decision by the Department regarding the State program. If the State program is not approved, Section 504(a) (2) of the Act requires implementation of a Federal program. Proposed Section 732.14 does not provide for another submission until a Federal program has been implemented. Section 732.13 does not provide for the establishment of partial State programs. Section 503(6) and (c) of the Act does provide for thee Secretary to render approval of part of the State program. However, Section 503(c) of the Act also requires the State to revise and resubmit the portion of the program not approved. The Office interprets this to mean that partial State programs were not intended to provide the State with primary regulatory responsibility and a State program. The language of Section 503 of the Act and the definition of State program in Section 701(26) of the Act require that a State be primarily responsible for jurisdiction over most aspects of the Act.

The alternative to providing for complete programs at the initial stage of the permanent program is to allow for enforcement of a permanent program partially by the State and partially by the Office. This alternative would create problems with title IV funding as well as manifest confusion as to which agency was the regulatory authority for what purposes. The proposed regulations therefore require States to assume jurisdiction over regulation of all surface coal mining and reclamation operations. The concept of shared State and Federal regulation and jurisdiction is considered a remedial concept and occurs after a program has been approved in whole and the Secretary finds that the State is not effectively implementing and ad-

ministering the program. This remedial action is intended for extreme circumstances. These provisions are discussed more fully under the portion of the preamble which addresses Section 733.12 of this subchapter.

Section 732.13(g) provides that a decision by the Secretary approving a program officially establishes a State program in that State. Section 732.13(g) also establishes that program submissions shall not be finally approved unless they can be approved in whole.

Proposed Section 732.14 implements Section 504(a) (2) of the Act and states that once a program submission is disapproved under a final decision by the Secretary pursuant to Section 732.13(f), the State may not submit another program until a Federal program has been implemented in that State. After implementation of a Federal program resubmission of State programs must be made pursuant to Sections 731 and 732 of the regulations.

The criteria upon which the Secretary must base his decision for approval or disapproval of programs is provided in proposed Section 732.15. Criteria for approval of State programs is found in Section 503(a) and (b) of the Act. Other criteria for approval are located elsewhere in the Act. Criteria regarding acceptable enforcement of State programs are found in Section 521(d) of the Act and criteria for State program designation of lands unsuitable are found in Section 522 of the Act. Criteria regarding acceptable variations in State programs are listed under proposed regulation 731.13 and discussed in the preamble which addresses Part 731.

The Secretary is required in proposed Section 732.15(a) to base his decision on information contained in the program submission, public comments received and testimony presented at the public hearing, written comments and other relevant information. The Secretary may not approve the program unless he finds that the program provides for the State to carry out the provisions and meet the purposes of the Act and regulations of the Secretary as provided by Section 503(a).

Under proposed Section 732.15(a)(1) the Secretary is required to find that the State demonstrated a good faith effort under the initial program. This judgement will be made objectively to the extent possible. The Office can compare State inspection reports with Federal inspection reports. State enforcement actions for violations of the initial performance standards can be analyzed. An effort will also be made to evaluate actual success in achieving reclamation under the interim performance standards. The Office must utilize the initial program as an opportunity to judge the capability of a State for assuming jurisdiction over the regulation of surface coal mining and reclamation operations.

Proposed Section 732.15(a)(3) establishes that on the date of the submission the State must have the authority required to implement the Act and program. The alternative to this requirement is to allow the States to develop authority after submission of the State program but prior to the Secretary's decision. Another alternative is to allow the States to develop authority after approval of the State program. Neither of these alternatives would be consistent with Section 503 of the Act and the definition of State program. The Office feels that the Act intended that the permanent program be fully developed and ready for implementation before final approval of a State program. A program development grant covering up to 80% of the costs of developing a program is available under Section 735 of the regulations.

Proposed Section 732.15(a)(3)(i) through (xii) establish specific requirements for a State program. No program can be approved unless the State has authority to impose each requirement. Proposed Section 732.15(a)(3)(vii) requires that a State have the authority to issue enforcement orders in accordance with the Act and consistent with the Secretary's regulations. The provision also requires that State inspectors have the same authority. The Office feels that authority to issue orders at the inspector's level is most important. Too much time is lost in States where official orders must originate from the State capital. The Office believes that the intent of the Act is to establish programs that immediately mitigate the safety and environmental hazards caused by surface mining and reclamation operations.

Generally, each provision with the exception of Section 732.15(a)(3)(xii) is specifically required by the Act to be included in a State program. Proposed Section 732.15(a)(3)(xii) requires a State to have authority to monitor, review and enforce the prohibition against indirect or direct financial interests consistent with Part 705 of these regulations. Section 517(g) of the Act requires that no employee of the State regulatory authority performing any function or duty under the Act shall have a direct or indirect financial interest in any underground or surface coal mining operation. Under the initial regulatory program States were not required to have authority to enforce 517(g) of the Act. They were, however, required to comply with the provision. The Office feels that the intent of Congress in 517(g) was to require States to have authority to enforce the prohibition against conflict of interest should it occur. If a State did not have authority to enforce 517(g) it is doubtful that the requirements of the Act could be fulfilled.

The Secretary is required in proposed Section 732.15(a)(4) to find that the State has and will continue to have sufficient personnel and funding to implement, administer, and enforce the provisions of the program and the requirements of the regulations. This provision implements Section 503 (a)(3) and (b)(4) of the Act. In reviewing program submissions the Office will evaluate program personnel against program functions to ensure that the requirements of the Act can be met. This review will include an analysis of the numbers and types of personnel to ensure that the performance standards in Subsection K can be incorporated into permits and enforced. Many of the performance standards are highly technical in nature. This requires that a State program include sufficient technical personnel to understand the requirements and ensure incorporation of the requirements in all permits. At a minimum the proposed staff should include capability to deal with the land use, engineering, hydrologic, geologic, agronomic and administrative requirements of the Act and regulations. The program should also include provisions to apply and enforce regulations dealing with more specialized areas such as blasting.

Proposed Section 732.15(a)(5) requires the Secretary to find that the State has a State law and regulations in effect that fulfill the requirements of the Act by specifically prescribing some conduct and requiring other under the State law.

Section 102(i) of the Act establishes that it is a purpose of the Act to assure that appropriate procedures are provided for public participation in the development, revision, and enforcement of regulations, standards, reclamation plans, or programs established by the Secretary or any State under this Act. Proposed Section 732.15(a)(5)(v) requires the State to have a system providing for public participation in the development, revision, and enforcement of State regulations and the State program. The regulations do not establish specific public participation procedures but approval by the Secretary will depend on whether the resulting participation at the State level is consistent with the level of participation designed into procedures at the Federal level pursuant to the regulations of this Chapter.

Proposed Section 732.15(a)(5)(vi) requires the Secretary to find that State law provides an administrative review of program actions. Review must be

available to persons who may be adversely affected by the action and at a minimum should be available for enforcement actions in accordance with Section 525 of the Act.

Proposed Section 732.15(a)(5)(vii) requires that the State not have laws or other provisions which are not consistent with the Act or regulations.

Under proposed Section 732.15(b) the Director may establish other criteria pursuant to the regulations to determine whether a State program should be approved. This is considered necessary so that the Office may require that State programs address regional differences and variations.

Proposed Section 732.16(a) provides that the Director may establish terms and conditions for State programs. These terms and conditions are the bases for providing the Office with up to date information on the program in a State.

Under proposed Section 732.17(a) (1) (3) the Director may require State consultation with the Office and require the State to provide the Office with access to books and records. These terms and conditions are necessary to allow the Director to evaluate the administration of an approved State program as required under proposed Section 733.12 of the regulations.

The Director may modify State program terms and conditions to reflect changes in the regulations which support the Act and to reflect changes in the conduct of the program. The Director is required to give notice to the State and hold an informal conference before any terms or conditions are modified. This ability to modify a program is necessary in order to meet unexpected or administrative changes and to allow the Director to adjust the program for smoother coordination with the Office. More significant changes will be processed as an amendment to the State program.

Proposed Section 732.17 provides for the State program to be amended for specific reasons. Amendments may be initiated by the State or by the Office. Amendments under this proposed Section are available so that a program can be adjusted to meet changes in staffing, budgets, and resources of the State regulatory authority and to meet changes in the number or size of State mining operations. Amendments are not intended for use by the Office to address inadequate implementation, administration or enforcement of State programs. Before the amendment process may be utilized, proposed Section 732.17 requires Amendments will not be necessary to address every minor change within a State. Proposed Section 732.17 also provides approval or disapproval procedures for program amendments. The Act does not specifically provide for State program amendments. However, the Office feels that amendment provisions must be included to allow programs to be adjusted to meet changing requirements and needs.

PART 733—MAINTENANCE OF STATE PROGRAMS AND CRITERIA AND PROCEDURES FOR SUBSTITUTING FEDERAL ENFORCEMENT OF STATE PROGRAMS AND WITHDRAWING APPROVAL OF STATE PROGRAMS

Proposed Section 504(a)(3) of the Act requires the Secretary to implement a Federal program if the State fails to implement, enforce or maintain its approved State program. In addition the Act in Sections 504(b) and 521(b) require the Secretary to provide enforcement of that part of a State program not being enforced by the State. It is from these requirements that Section 733.11 has been drafted requiring the States to implement, administer, enforce and maintain their approved State program or invite Federal involvement.

Procedures for substituting Federal enforcement for a State program or withdrawing approval of a State program are contained in Section 733.12. This Section establishes two options for the Secretary to use in dealing with improper administration and enforcement of a State program by a State.

The Director is required in proposed Section 733.12(a) to evaluate at least annually the effectiveness of the administration of a State program. He must also make an evaluation in response to a citizen report that a State is not maintaining its approved program. The proposed regulation requires prompt written notice to States if the evaluation shows ineffective administration of the program. The regulation requires the Director to hold an informal conference with the State if requested. The purpose of the informal conference is to allow the State to explain its position regarding allegations of ineffective administration. If, following the informal conference the Director still believes that the program is not being effectively administered he shall hold a public hearing in order to make a determination whether the State is effectively administering and enforcing the State program. Section 521(b) of the Act provides for this public hearing. The informal conference between the Office and the State is an attempt to solve problems of State administration without first going to a public hearing. However, if the State cannot show at the informal conference that enforcement of the program is actually effective the Director must hold a public hearing on the matter. Although not specifically stated in the regulations this and other informal conferences between the Office and the State will be open to the public.

Upon completion of the public hearing proposed Section 733.12(c) instructs the Regional Director to submit the available information and a recommendation to the Director. If on the basis of information following the hearing the Director finds that there are violations resulting from failure of the State to administer part or all of the State program effectively, the Director has two options:

(1) Substitute direct Federal enforcement of the State program; or

(2) Withdraw approval of the State program in whole or in part.

The first option, substituting Federal enforcement of the State program, implements Section 521(b) of the Act. This section provides for Federal enforcement of State programs that have been implemented and operated past June 3, 1980. Enforcement of all or any part of a State program by the Office under 521(b) of the Act is interpreted to include administration and enforcement of the whole program. Under this option a new permanent program would not be implemented. Instead, the Office would simply run all or part of the approved State program.

The second option under this Part allows the Director to withdraw approval of the State program for reasons listed in proposed Section 733.12. Under this option the Director shall propose, promulgate and implement a Federal program in the same manner as provided in Part 736 of the regulations. Withdrawal under this option can be for all or part of the program. The second option allows the Director to withdraw approval any time following implementation of the program by the State. The Office relies on Section 504(a)(3) of the Act and Senate Report No. 93-402 as an indication that Congress intended that the Secretary to ultimately promulgate and implement a Federal program rather than enforce specific areas of the program if necessary. Section 504(a)(3) requires that a Federal program be implemented no later than June 3, 1980 if a State fails to implement, maintain or enforce its State program. The time deadline is viewed as the initial date that either a Federal or State program must be effective, not as a limitation on the authority of the Secretary or the Office to withdraw approval of a State program and replace it with a Federal program.

Withdrawing approval is designed to be the remedial action available to the Director for extreme cases of ineffective program administration by a State. Enforcement of all or part of a State program by the Director under the first option will be the preferred

remedial measure and will be adequate to deal with less extreme cases of ineffective program administration.

In evaluating the administration of State programs as required in proposed Section 733.12 the Director shall base his decision to substitute Federal enforcement or withdraw approval on the adequacy of program resources and processes as enumerated in Section 733.13. The decision will also be based on the adequacy of the program permitting process, program inspection process, adequacy, and enforcement and the overall adequacy of the entire program. These criteria have been established to provide a rational basis for proper evaluation of a State program. In evaluating the program the Regional Director and Director shall, to the extent possible, attempt to quantify program effectiveness or failures.

PART 736—FEDERAL PROGRAMS ON STATE LANDS

The regulations in Part 736 establish the procedural requirements governing Federal programs on State lands. These procedures are necessary where the Office of Surface Mining assumes primary regulatory jurisdiction within a State when that State fails to submit an approved State program or fails to administer or enforce its approved program effectively.

In addition, the regulations specify procedures for terminating a Federal program when primary regulatory jurisdiction is returned to a State under an approved State program.

The intent of these regulations is to provide:

(1) The necessary criteria for implementing jurisdictional transfers;

(2) The procedural steps necessary to ensure orderly jurisdictional transfers; and

(3) The opportunities for public participation required by the Act.

§ 736.3 Responsibility.

Section 736.3 assigns the responsibility of a Federal program for a State to the Director and allows him to delegate this responsibility to the Regional Director. The alternatives are to leave all authority under this Section exclusively with the Director, to give all the authority to the Regional Director, and to allow the Regional Director to delegate his authority to a subordinate. Allowing the authority to remain with the Director could be cumbersome. Currently, it is not known how many States will require a Federal program. In the event that there are a large number of States requiring a Federal program for a State, this delegation is a realistic method for administering the responsibility designated under Sections 201(c) and 504 of the Act. The promulgation, revision and termination provisions shall remain exclusively with the Director to maintain consistency among the Federal programs. Allowing the Regional Director to delegate all the responsibility under this Section places much responsibility at too low a level in OSM and makes it difficult to achieve consistent application of the requirements of the Act on a national basis.

§ 736.4 Authority.

(1) Section 736.4(a) provides the Director with exclusive jurisdiction for the regulation and control of all coal exploration and surface coal mining and reclamation operations taking place on non-Federal and non-Indian lands within such State, as provided in Section 504 of the Act.

(2) Section 736.4(b) vests the Director with the exclusive jurisdiction for the regulation and control of the promulgation, implementation and maintenance of a partial Federal program for a State. This Section provides that the Director will be the regulatory authority for any part of a State program found not to be enforced effectively, while the State regulates only those aspects of the State program not affected by a partial Federal program.

(3) Section 736.4(c) is written in accordance with Section 502(f) of the Act.

§ 736.5 Definitions.

(1) Section 736.5(e) gives a definition of the "termination of a Federal program for a State," as provided for in Section 504(e) of the Act. This term identifies the legal mechanism for returning primary jurisdiction to the State under an approved State program or for returning jurisdiction to a State whose program was withdrawn in part.

§ 736.11 General procedural requirements.

(1) Section 736.11(a)(1) discusses the promulgation of a complete Federal program based on Sections 504(a)(1) and (2) of the Act.

(2) Section 736.11(a)(2) specifies that, as provided for in Sections 201 and 504(a)(3) of the Act, the Director shall promulgate a Federal program upon the withdrawal of approval of a State program. Public participation is encouraged in the development and revision of a Federal program, in accordance with Section 102(i) of the Act. The establishment of a complete or partial Federal program allows for such input.

The procedures established for promulgation of a Federal program are to be distinguished from those for substituted Federal enforcement of a State program. A Federal program requires more specific procedures and opportunity for public input, as provided for in Section 102(i) of this Act, while the substituted Federal enforcement of a State program is a more expedited procedure. One alternative considered was to allow the public to petition for the promulgation of a Federal program. However, the State withdrawal procedures in Section 733 provide criteria for the Director's evaluation of a State program. Consequently, the Director will consider public comment, as provided in Section 733.

(3) Section 736.11(b) provides for the revision of a Federal program, based on Sections 102, 501(b) and 504 of the Act. This provision allows the Office to continue to update any Federal program due to changing circumstances from physical conditions, new technology, new national requirements under the Act or new awareness of environmental affects of coal mining. Also this provision is in keeping with the charge of Section 102(i) for public participation in the process.

(4) Section 736.11(c) provides for the termination of appropriate portions of a Federal program for a State, based on Sections 102, 201, 501(b) and 504 of the Act. The Director may withdraw a Federal program when a State is considered to have the capability to carry out the appropriate provisions of the Act and this Chapter under Part 732. The alternative is to allow partial termination of a Federal program. Such an alternative may not provide enough incentive to the State to obtain an approved State program.

§ 736.12 Public notice requirements.

(1) Based on the authority of Section 102(i) and 504(b) of the Act, Section 736.12(a) requires the Director to publish notice in the FEDERAL REGISTER at least 60 days in advance of the public hearing. Publishing in the FEDERAL REGISTER allows for a wide dissemination of information concerning the Federal program. The sixty day time period provides greater opportunity for public examination than the alternative of thirty days.

(2) Section 736.12(b) provides for public notice in at least one newspaper of general circulation in the coal mining area(s) of the State. Publishing notice in the newspaper(s) allows a wider distribution of information concerning the Federal program or revision and, together with Section 736.14, gives a wider opportunity for public comment. The basis for this authority includes Sections 504(c) and 102(i) of the Act.

§ 736.13 Public comment.

Publication in the newspaper three times within 30 days of the hearing provides notification close enough to the hearing to remind interested persons of the opportunity to attend.

(1) Section 736.13 provides for public comment in the promulgation and revisions of Federal program from the solicitation of comments from other agencies, the publication of notice in the FEDERAL REGISTER and newspapers, public participation in a public hearing, possible extension of the comment period and availability of information concerning the contents of the program and public response to it. Individually and collectively, these Sections derive their authority from Sections 102(i), 201, and 504 of the Act.

(2) Section 736.13(c) provides for a public hearing, as required by 504(c) of the Act.

(3) Section 736.13(c)(1)(i) provides for legislative procedures at the public hearing. The legislative procedures allow for comments from a broadly affected category of persons, whereas the alternative of adjudicatory procedures encompasses a more limited format on who may speak and what they may say. At the legislative hearing, all related information may be considered in any decision concerning the Federal program or revision. All relevant information needs to be elicited for the contents of a Federal program.

As the Office interprets Section 504(b) of the Act, only a legislative hearing is required. See *Vermont Yankee Nuclear Power Commission* v. *NRDC* — U.S. — (April 3, 1978); *South Terminal Corporation* v. *E.P.A.*, 504 F.2d 646 (1st Cir., 1974).

(4) Section 736.13(c)(1)(i) provides that the Regional Director or his designee shall present the contents of the proposed program or revision. This requirement is considered important in keeping the public informed of the contents, so that interested persons can respond accordingly.

(5) Sections 736.13(c)(1)(iii) and (2) are based on Section 102(i) of the Act.

(6) Section 736.13(c)(3) requires that the Regional Director submit all the evidence and recommendations for and against a Federal program or revision and any proposed contents to the Director. The Director, as provided in Section 736.15, thus makes the final decision concerning the program. The alternative is to allow the Regional Director to make the final decision; but, as discussed earlier in this Preamble, the promulgation of a Federal program or revision would require the supervision of the Director to insure some consistency in Federal programs for a State, while allowing the Regional Director to make recommendations in line with the State's relevant physical conditions.

§ 736.14 Director's decision.

Based on the authority of Sections 102, 201, 501(b) and 504 of the Act, the Director determines whether to promulgate or revise a Federal program and publishes any rules for such program.

§ 736.15 Implementation, enforcement and maintenance of a Federal program.

(1) Section 736.15(a) deals with the number of days for the Director to implement, maintain and enforce the provisions of the Federal program. Prior to the promulgation of any proposed Federal program, the Secretary will have provided adequate public notice and will have held a public hearing in the affected State. The need for the Federal program will have been established. Consequently, it was felt that a 30 day time limit would be preferable to other alternatives such as 60 days, 90 days or no time limit at all. The exceptions to the year limitation for designating lands unsuitable in a Federal program are areas so designated by Congress the implementation of a partial Federal program to administer such provisions.

The intent regarding the unsuitability for surface coal mining operations is known for those lands which Congress has already designated, and there is no need for a time delay in such designation. Also, to wait a year for the Federal program to administer the very provisions the State program was not administering would not be consistent with other provisions of the Act. One such provision is Section 102(m), which states that the purpose of the Act is to insure the protection of the public interest through effective control of surface coal mining operations. Impeding the implementation of a designation process and not implementing the intentions of Congress would not seem to protect the public interest.

(2) 736.16(b) allows the permittee to submit the sections of a new application that the Director determines to be relevant, rather than requiring the submission of an entire new application. The additional paper work probably would not produce meaningful results.

§ 736.16 Termination procedures.

This Section determines the procedure through which a Federal program is terminated. Section 504(e) is the basis of this authority.

§ 736.17 Consolidation of procedures.

Section 736.17 allows the Director to consolidate, as appropriate, public notices and hearings. This procedure avoids duplication when appropriate.

§ 736.21 General requirements of a Federal program.

Section 736.21 identifies the difference in the general requirements of a complete or partial Federal program. The authority for this Section is derived from Sections 102(a), (b), (c), (d), (e), (m); 201(c); 501(b); 503(a); 504(a); 504(b) and 505.

§ 736.22 Contents of a Federal program.

(1) Section 736.22(a)(1) requires the Director to take into consideration the State's chemical, geological, hydrological, agronomic and relevant physical conditions. All of the specified physical conditions are considered significant and should be thought about in the promulgation or revision of a Federal program for a State. This authority is derived from Sections 201(c)(9) and 504(a) of the Act.

(2) Section 736.22(a)(2) requires the consideration of relevant Federal laws imposing duties on the Secretary. The reference to four laws is to call attention to these specific laws, but this reference is not intended to exclude other relevant laws. The authority for this Section is derived from Section 102(a) of the Act.

(3) Section 736.22(a)(3) requires more stringent performance standards than those otherwise provided when the State law or regulation is more stringent in land use and environmental control and regulations than the Act or this Chapter.

(3) Section 736.22(b) identifies the minimum provisions for a complete Federal program and appropriate provisions for inclusion in a partial Federal program. This Section, contents of a Federal program, provides the basic guidelines for a Federal program for a State. The alternative considered is to provide detailed regulations delineating as many specific requirements as possible. These regulations are skeletal in design and do not enumerate the specific requirements of a Federal program for a State, since such a Federal program must consider the nature of the individual State's relevant physical conditions and local environmental and agricultural conditions, according to Sections 504(a) and 201(c)(9) of the Act. The authority for Section 736.22(b) is derived from the following Sections: Section 102(a), (b), (c), (d), (e), (i), (m); 201; 501(b); 502(d) and (f) 503(a); 504, 506-519, 521, 522(e) 524, 525, 526(f), 527, 529, 701(28), 702, 711, 713, 716, 717 and 719.

(4) Section 736.22(b)(2) derives its authority from Sections 504(h); 702(a), (b), (c); 713 of the Act and the National Environmental Protection Act. This Section identifies three Acts requiring permits which need to be coordinated with the Act and these regulations. Others could probably be listed here, but the Acts have an important impact on surface coal mining and reclamation operations.

§ 736.23 Effect on State law or regulations.

The authority for this Section is Section 504(g) and 505 of the Act.

Section 736.24 emphasizes provisions in other parts of the regulations concerning the effect of a Federal program on State findings, such as Sections 884.14, 884.16, 886.18 and 740.12 of this Chapter.

SUBCHAPTER D FEDERAL LANDS PROGRAM

PART 740—GENERAL REQUIREMENTS FOR SURFACE COAL MINING AND RECLAMATION ON FEDERAL LANDS

Part 740 sets forth the general definitions and administrative responsibilities for surface coal mining and reclamation operations on Federal lands. The term "mining plan" is defined as a complete mining and reclamation plan approved by the Secretary which complies with the requirements of the Mineral Leasing Act of 1920, as amended, the Surface Mining Control and Reclamation Act of 1977, and all other applicable laws and regulations. This definition is intended to reflect the fact that both of these Acts require mining and reclamation plans to be filed, and that surface coal mining and reclamation may not be conducted unless a mining plan has been approved by the Secretary (30 U.S.C. 207(c) and 30 U.S.C. 1273). Essentially an application for a mining plan approval would contain the information required for a permit to meet the requirements of the Surface Mining Control and Reclamation Act and a mining and operations plan which would meet the requirements imposed by the Mineral Leasing Act, as amended. The requirements for a Mineral Leasing Act which will cover the life of the mine, will be set forth in regulations to be promulgated by the United States Geological Survey in 30 CFR 211 when the regulations in this Subchapter become effective. The first three parts of the application for mining plan approval thus become the "permit application" for the purposes of the Federal Lands Program.

This section also sets forth the responsibilities for review of permit applications among the Office of Surface Mining, the Geological Survey, and the State Regulatory Authority in states which have entered into a State-Federal cooperative agreement. It is proposed that the Office of Surface Mining and the State regulatory authority would be responsible for reviewing the permit application, but the Geological Survey will be responsible for the review of Mineral Leasing Act mining and operations plan which is required to be filed with the permit application. This division is intended to reflect the apportionment of authority set forth in the two Acts. The apportionment of authority under the two Acts precludes any other alternative with respect to division of responsibilities for review of permit applications. The Department believes the proposed method for submission of applications to obtain authorization to conduct operations will facilitate review by the agencies involved and would impose no additional burden on applicants.

Section 512(e) of the Act provides that coal exploration on Federal lands shall be governed by Section 4 of the Federal Coal Leasing Amendments Act of 1975 (90 Stat. 1085 30 U.S.C. 201(b)). Section 4 provides for the issuance of coal exploration licenses, which may only be issued for lands on which a coal lease has not been issued. Regulations governing issuance of coal exploration licenses are found in 30 CFR Part 3507. Coal explorations under licenses are primarily for the purpose of obtaining geological and geophysical data and information upon which to determine whether coal deposits of sufficient quality and quantity exist in an area to justify leasing the lands involved. Under existing Departmental procedures, the Geological Survey is responsible for making such resource determinations and recommending establishment of leasing areas. Accordingly, it is proposed that the Survey will continue to be responsible for supervising the conduct of coal exploration license operations. However, coal exploration operations conducted on leased lands under a permit issued pursuant to this Chapter will be supervised by OSM.

Section 740.4(d) requires the Regional Director to, "consult and obtain the consent of the authorized officer of the surface managing agency with respect to special requirements relating to protection of natural resources." This provision is required by Section 6 of the Federal Coal Leasing Amendments Act of 1975 (90 Stat. 1807 30 U.S.C. 207(c)), which states that, "Where the land involved is under the surface jurisdiction of another Federal agency, that other agency must consent to the terms of such approval."

Section 740.4(f) requires that the Regional Director consult with the authorized representative of the surface managing agency for approval of all bonds. Concurrence on performance bonds is needed to assure that the bond is adequate to protect natural resources not otherwise covered by these regulations and to achieve the desired post-mining land use.

PART 741—PERMITS

Part 741 provides for application for and revision, renewal and cancellation of permits to conduct surface coal mining operations on Federal lands. Only the Secretary has the authority to approve mining permits.

The permit application requirements for the Federal lands program are intended to be identical to that of State programs pursuant to Subchapter G *except* for requirements imposed by other Acts. The preamble to the State permit application process explains the Federal lands permit regulations which are parallel to those of the State program. Those additional requirements will be discussed in the following paragraphs on individual regulations.

Section 741.4(b) provides for joint review of applications for permits, revisions and renewals by the authorized State regulatory authorities and the Regional Directors where cooperative agreements under Section 523(c) of the Act are in effect. A joint review is required because the State will review for compliance with State reclamation standards, and the Regional Director will review the requirements of the National Environmental Policy Act and will incorporate the review and recommendations of other Federal agencies.

Section 741.11(a) requires that all operators of surface coal mining and reclamation operations file a complete permit application not later than two (2) months following the effective date of the regulations in this Subchapter. The legislative history of the Act indicates that Congress intended the effective date of the Federal lands program to be the effective date of the regulations in this Subchapter. The authority for the time periods within which to file an application and obtain a permit contained in Sections 741.11(a) and (b) may be found in Section 506(a) of the Act. These requirements are extended to private lands where both Federal and private lands are included in the same mining plan.

The Department proposes in Section 741.12(d) that the information to be included in the application for mining plan approval shall be identical to that required in Subchapter G. Accordingly, the regulations cross-referenced to pertinent Parts of Subchapter G for the information and data to be included in the application. An alternative, repeating verbatim all of the requirements of this Part was rejected since it would be too highly repetitious and would unduly increase the bulk of the regulations. The same method is proposed for regulations governing the procedure to obtain authorization to conduct special types of mining operations in Section 741.13.

This Section also requires that a Federal lessee protection bond must be submitted to the Regional Director when the applicant cannot obtain written consent of a permittee or

lessee to enter and commence surface coal mining operations on Federal lands. This type of bond is specifically required by Section 715 of the Act to secure payment of any damages to the surface estate. This is a requirement in Section 715 of the Act.

Section 741.14(b) provides for termination of the permit by the Secretary if surface coal mining operations have not commenced within three years, unless extended under specific circumstances. Permits on Federal lands cannot be extended beyond the period allowed for diligent development in accordance with Section 7 of the amended Mineral Leasing Act of 1920. This restriction is found in Section 506(c) of the Surface Mining Act.

Sections 741.16(a), (b) and (c) contain certain criteria for approval of permits. These criteria are the same as prescribed in Part 786, except for the requirements in subparagraph (d), (e) and (f) which require additional findings applicable only to operations on Federal lands.

Section 741.17 contains the requirements for public participation in the permit review process. The requirements are identical to those in Part 787. In practice, the Regional Director will be responsible for providing notice of permit applications, obtaining the views of interested parties and governmental agencies and scheduling conferences and public meetings on applications. These requirements are authorized by Section 513(a) of the Act.

Subpart 741.23 contains provisions whereby a transfer, assignment or sale of the rights granted under a permit may be made upon approval of the Secretary, in accordance with Part 792. The provision in paragraph (e) is intended to clarify the fact that rights granted under a permit are separate and distinct from the leasehold rights granted under a lease issued pursuant to the Mineral Leasing Act. Transfers of leasehold rights must be approved in accordance with Section 30 of the Mineral Leasing Act, as amended (30 U.S.C. 187), which requires Secretarial approval of any assignment or subletting. The regulations in 43 CFR 3506 contain the requirements for obtaining approval of such assignments.

PART 742—BONDS ON FEDERAL LANDS

Lessees are required under 43 CFR 3504 to submit a Federal lease bond to assure compliance with the terms and conditions relating to diligence, production, royalty and rental of a Federal coal lease issued under the Mineral Leasing Act of 1920. The performance bond required by this Part assures compliance with performance standards under SMCRA. These regulations propose that after the effective date of this Subchapter, lessees with existing Federal lease bonds issued under 43 CFR 3504 may apply for the release of that portion of the bond that is already covered by the performance bond issued under Section 742.12(a). After the effective date of this Subchapter, permit applicants will be required to obtain the performance bond required by this Part and a Federal lease bond will continue to be required under 43 CFR 3504. The authority for the Federal lease bond requirement may be found in the Mineral Leasing Act. However, the coverage of the Federal lease bond will be limited to lease terms and conditions to avoid dual bonding.

Section 509 of the Act authorizes acceptance of bonds without separate surety under certain conditions. The regulations of this Part do not contain a provision pursuant to this Section. Standards for protection of public resources have traditionally been set at the highest level, thus precluding self-bonding. Public comment is invited upon whether such a provision should or should not be included.

Subpart 742.13 provides for a Federal lessee protection bond in those instances where Federally-owned coal is to be mined, the surface of the land is subject to a lease or permit not held by the operator, and the applicant is unable to obtain the consent of the permittee or lessee to enter and commence surface coal mining. This provision is authorized by Section 715 of the Act.

Subpart 742.17 requires a liability insurance policy to compensate all persons injured or property damaged as a result of surface coal mining and reclamation operations in accordance with Part 806, except that as proposed this section would prohibit the application on Federal lands of the provision for self-insurance equivalency in Part 806. As in the case of self-bonding, self-insurance is prohibited in the interest of providing the highest possible protection on public lands. Public comment is invited on this provision.

PART 743—INSPECTIONS, ENFORCEMENT, AND CIVIL PENALTIES

Part 743 provides for inspection of surface coal mining and reclamation operations and enforcement of applicable laws and regulations.

The primary responsibility for inspection to assure compliance with environmental protection requirements on Federal lands rests with the Regional Director. These responsibilities may be assumed by a State regulatory authority under a State-Federal Cooperative Agreement entered into pursuant to Part 745 of this Subchapter.

The Mining Supervisor is responsible for inspection to assure compliance with lease terms and conditions relating to coal development, production and resource recovery. It is the responsibility of the Mining Supervisor to coordinate inspections through the Regional Director to the maximum extent practicable. The internal procedure to accomplish this is set forth in a division of responsibility between the Office of Surface Mining, the Geological Survey and the Bureau of Land Management in a document approved July 5, 1978.

PART 744—PERFORMANCE STANDARDS ON FEDERAL LANDS

The purpose of this Part is to set forth unique performance standards applicable to operations on Federal lands which are not found in Subchapter K. These standards relate to obligations imposed by the Mineral Leasing Act, as amended. The public is invited to comment on any additional performance requirements which should be included in this Part. In addition, this Part sets forth the procedures and requirements for temporary or permanent abandonment of operations. As used in this Part, "abandonment" is intended to be synonymous with "suspension" or "termination" of operations.

PART 745—STATE-FEDERAL COOPERATIVE AGREEMENTS

Part 745 provides the criteria and procedures for a Cooperative Agreement between the Secretary and a State including requirements and limitations. The legislative history of the Act indicates that the primary objective of Cooperative Agreements is to take into account mixed sections of the private and Federally owned surface. This ownership pattern has effectively provided State control over alternate sections of land. The purpose of Cooperative Agreements is to bring all such sections into a single regulatory program. The authority for this Part may be found in Section 523(c) of the Act.

Section 523(c) of the Act, unlike other sections, does not prescribe detailed requirements for the State-Federal Cooperative Agreements. Consequently, the Office may be very flexible on the procedures to be followed. Certain provisions are required by the Surface Mining Act or other Acts which prohibit the Secretary of the Interior from delegating his authority.

A number of comments were received on a draft version of this Part suggesting changes and additions, including in one case a complete rewrite of the Part. One commenter suggested that the entire part be deleted from the regulations. The Office has elected not to accept this suggestion for the reason that failure to promulgate regulations implementing Section 523(c)

of the Act would leave the States and the public completely uninformed about the procedures for entering into cooperative agreements; the limitations of each agreement; and the terms, conditions or circumstances under which such agreements may be modified or terminated. Although the Office of Surface Mining recognizes that cooperative agreements will be slightly different from State to State in order to take into account differing factors, such as a State's legal authority to regulate operations on Federal lands, it is felt that regulations setting forth minimum standards for cooperative agreements are essential.

Section 745.11, which was titled *General requirements and limitation* in a preproposed draft has been re-titled *Application and Agreement* and reorganized to set forth the data and information which it believes the Office of Surface Mining and the Secretary will need in order to make the determination required by Section 523(c) of the Act that the State has the necessary personnel and funding to fully implement a cooperative agreement. Much of the information is the same as, or similar to, information States are required to file under Part 771, in order to obtain approval of a State program. It is not intended that duplicative information would be collected. Accordingly, Section 745.11(b) would not require States to repeat information which it has already submitted as a part of its State Program application. Comments are requested on the need for additional information or reasons why particular information should not be required.

Section 745.11(c), (d) and (e) would establish procedures for participation by the public and governmental entities in the review of a proposed cooperative agreement. These procedures are similar to the requirements for public participation in various other parts of the regulations and would include a requirement for a public meeting to be held in the State capitol one month after the notice of a request to enter into an agreement is published in the FEDERAL REGISTER and newspapers of general circulation throughout the State. The Office recognizes that some States may elect to request a cooperative agreement at the same time an application for a State program is filed. Accordingly, it proposed that the public meeting requirement in this Part could be combined with the meeting required by Part 732 for a State program. Comments on the proposed procedure for public participation are requested.

The Office has not accepted a comment that cooperative agreements require provisions for citizen participation in inspection and enforcement procedures because citizen participation is already assured in other provisions of this Chapter. Such participation is required as part of the State regulatory program upon which the cooperative agreement is based. Also, not accepted is a suggested requirement that *quarterly* reports to the Regional Director be required concerning the number of State inspections, the number of violation and cessation orders, and the amount of permit fees. The Office has no information before it to justify requiring quarterly reports and believes the nature and timing of reports that should be required can best be resolved as a part of the cooperative agreement.

Section 745.13 recites the authority which the Office believes must be reserved to the Secretary and cannot be delegated to a State under a cooperative agreement. The authority for the reservation in subparagraphs (a), (c), (d), (e), (f), and (i) is found in Section 523(c) of the Surface Mining Act. The reservations in subparagraphs (g), (h), (b), and (l) are required by the Mineral Leasing Act. In addition, the Office has concluded that the authority to prepare environmental impact statements required by the National Environmental Policy Act should not be delegated in light of court decisions, such the opinion in *Conservation Society for Southern Vermont* vs. *Secretary of Transporation* 362 F. Supp. 627.

The Office has not in this draft included one commenter's suggested procedures for modification of agreements which includes detailed provisions for notice of State requests for modifications and hearings because the same subject matter is already covered by the requirements in Section 746.15 that amendments must be adopted by rulemaking.

Section 745.18 provides that permit application fees collected by a State under an agreement shall be retained by the State. Section 705(c) of the Act provides that if a State elects to enter into a cooperative agreement under Section 523(d) of the Act, the Secretary may increase the amount of annual grants by an amount which he determines is approximately equal to the amount the Federal Government would have expended for regulation of operations on Federal lands. Under the proposed provision the Secretary could either (a) allow the State to retain the permit fees and deduct the amount collected from the annual State grant or (b) require the fees to be forwarded to OSM, thereby eliminating any requirement to adjust the amount of annual State grant. The office does not believe there is a legislative history to justify a conclusion that the States are entitled to receive both the fees and the increase in annual State grants. The Office is entirely flexible on this matter and invites the States and others to comment on the most satisfactory procedure to be followed.

SUBCHAPTER F—AREAS UNSUITABLE FOR MINING

Section 522 of the Surface Mining Act establishes a procedure to designate areas unsuitable for all or certain types of coal mining, thereby enabling the State and Federal governments to respond to conflicts which often arise between coal mining and other uses of the land. This Subchapter implements the provisions of Section 522(a)(1) for establishing a State planning process, of 522(a)(2) for mandatory designations when reclamation is infeasible, 522(a)(3) for discretionary designations according to the criteria in 522(a)(3)(A)-(D), 522(a)(4) state process requirements, 522(a)(5) implementation requirements, 522(a)(6) exemptions, 522(c) petitions, 522(d) economic, environmental and resource impact statements, and 522(e) limitations and prohibitions of mining.

Lands covered by the petition process are all private and State-owned lands within a State and all Federal lands as defined in the Act. Additionally, for Federal lands, the Act provides for a Federal coal lands review which is a review process for Federal lands in addition to the petition process. Indian lands are not covered by these regulations. The petition process, the Congressional designations, except where specifically exempt and the Federal coal lands review all apply to the surface effects of underground mining as well as surface mining.

Under the procedures for designation, citizens can petition the regulatory authority to designate certain areas unsuitable for all or certain types of surface or underground coal mining. If the regulatory authority designates an area unsuitable for mining, it is then prohibited from issuing permits for that area. Additionally, there are procedures for citizens to petition the regulatory authority to terminate a designation of unsuitability for mining. If a petition to terminate a designation is successful, the regulatory authority may then issue permits for that area.

The regulatory authority must consider petitions which are filed after a permit application has been filed. Once a permit has been granted however, the regulatory authority cannot retract a permit when a petitioner seeks to designate a permitted area.

The regulatory authority is required to respond to two types of petitions. If a petition alleges that reclamation is not technologically and economically feasible under the standards of the Act, these regulations, or the laws and regulations pursuant to an approved

State or Federal program, and the regulatory authority agrees, the regulatory authority is then required to designate an area unsuitable for all or certain types of surface mining. If a petition seeks to designate certain fragile, historic, renewable resource or natural hazard lands unsuitable for all or certain types of surface mining, the regulatory authority has discretion to designate an area unsuitable if it finds that surface mining operations would:

"be incompatible with existing State or local land use plans or programs"; or

"cause significant damage to important cultural, scientific, and esthetic values and natural systems"; or

"result in a substantial loss or reduction of long range food or fiber productivity"; or

"substantially endanger life and property in areas subject to frequent flooding or unstable geology."

Unlike the permit application process, the designation process is to be applied on a natural *area* basis, rather than a specific mine or site-by-site basis. Congress determined that the area-by-area approach will benefit the coal industry because the industry can learn, in advance of permit application, those areas which are not open to mining or certain mining methods. *Report of the House Committee on Interior and Insular Affairs, Surface Mining Control and Reclamation Act of 1977, p. 95.*

The regulations of this Subchapter are divided as follows:

1. Part 760 explains the general requirements for State programs, Federal programs within States, the petition process, and areas where the Act prohibits or limits surface coal mining operations under certain conditions.

2. Part 761 establishes procedures to be followed in determining whether a proposed surface coal mining operation is prohibited or limited by the requirements of Section 522(e) of the Act. It also contains definitions and procedures to be used in determining whether a proposed surface coal mining operation is exempt from these prohibitions or limitations.

3. Part 762 contains the criteria to be used in determining whether an area (either State or Federal lands) is unsuitable for all or certain types of surface coal mining operations.

4. Part 764 sets forth the minimum requirements for a State program to designate areas unsuitable for all or certain types of surface coal mining operations.

5. Part 765 provides the minimum requirements for a Federal program in a State to designate areas unsuitable for all or certain types of surface coal mining operations.

6. Part 769 contains the process for petitioning Federal lands as unsuitable for all or certain types of surface coal mining operations.

The main issues facing the drafters of these regulations are:

1. Who may petition for designation or termination;

2. How to resolve potential conflicts between the permit process and the designation process when petitions are filed for areas where a permit application is pending;

3. Whether to protect the confidentiality of a petitioner;

4. How to implement Section 522(a)(4)(c) which requires States "to have a method or methods for implementing land use planning decisions concerning surface coal mining operations."

5. How extensive should be the data base and inventory system that a State is required to establish;

6. Whether to require the regulatory authority to hold a fact finding or an adjudicatory hearing;

7. How to define valid existing rights and substantial legal and financial commitment;

8. What judicial review is required after State regulatory authority decisions on petitions;

9. Whether to develop criteria for where designations should be made because reclamation is not technologically and economically feasible;

10. Whether to establish some thresholds for determining when the regulatory authorities would be required to designate areas unsuitable for mining under the discretionary criteria; and

11. Coordination of petitions for Federal-State areas, cross State areas, and Indian lands and other areas.

Who may petition:

The Act states, "Any person having an interest which is or may be adversely affected shall have the right to petition the regulatory authority to have an area designated as unsuitable for surface coal mining operations or to have such a designation terminated." (522)(c).

The definition of "person" partly determines who may petition. The OSM regulations expand on the language of the Act. In the Act, the term, "person" is defined as follows: "individual, partnership, association, society, joint stock company, firm, company, corporation or other business organization." The present draft of the regulations expands the definition of person by incorporating all governmental entities listed in Section 524 of the Act. That Section lists the following entities: "Any agency, unit, or instrumentality of Federal, State, or local government, including any publicly owned utility or publicly owned corporation of Federal, State or local government". Thus, under the present draft, State agencies and local units of government have been included in the definition of person and may petition to have areas designated unsuitable. Previous drafts of these regulations did not contemplate an expanded definition of person; instead it had been left to the States to decide whether to expand the definition.

The other requirement for a petitioner is to have standing. The legislative history indicates Congress intended "an interest which is or may be adversely affected" to be construed to be coterminus with the broadest standing requirements enunciated by the U.S. Supreme Court. See: *Sierra Club* v. *Morton*, 405 U.S. 727 (1972). The legislative history further indicates that where there is doubt, the doubt should be resolved in favor of public participation. (121 Cong. Rec. 13368, May 7, 1975).

A petitioner must state which of his/her activities or interests would be adversely affected by mining the area which is proposed for designation. The regulatory authority must then determine if the petitioner has standing. Where there is doubt, however, the legislative history indicates that Congress intended for the regulatory authority to resolve the doubt in favor of public participation. (*121 Cong. Rec. 13368, May 7, 1975*).

Related to the issue of who may petition is the issue of whether or not a State agency could initiate a designation without petitioning. This procedure would parallel the Federal coal lands review under 522(c). The Act does not explicitly authorize any such procedure, yet the legislative history explicitly states that designations must be initiated by petitions. *S. Rep. No. 128, 95th Cong., 1st Sess. 93 (1977).*

OSM considered two alternative solutions to the issue of who may petition. Leaving the definition of person as it stands in the Act would exclude local governments and State agencies from filing petitions. This solution was rejected because the drafters believe that participation in the process of designating lands unsuitable and terminating designations should be as broad as possible. Permitting State agencies to initiate designations without filing petitions was considered but was rejected because the legislative history (*Ibid*) explicitly states that designations must be pursuant to petitions.

How to resolve potential conflicts between the permit process and the designation process when petitions are filed for areas where a permit application has also been filed.

Section 510(b)(4) of the Act states that no permit may be issued by the regulatory authority unless it finds in writing that "the area proposed to be mined is not included within an area designated unsuitable for surface coal

mining pursuant to Section 522 of this Act or is not within an area under study for such designation in an administrative proceeding commenced pursuant to Section 522(a)(4)(D) or Section 522(c)."

As drafted, these regulations establish the point at which a permit application will be deemed so close to approval that, even if a designation petition is filed, the permit can still be issued in spite of Section 510(b)(4). In this draft that point is by the end of the informal conference period, or if there is no conference, at the end of the comment period. Without some limitation a petitioner could tie up the permit for a mining operation indefinitely by filing repeated petitions, no matter how frivolous.

One alternative considered was not including a time limit for petitions to affect application process. OSM explicitly solicits comment and guidance on how to resolve this problem.

Confidentiality of petitioner.

Section 703 of the Act protects employees from being fired or otherwise suffering discrimination. The Act is unclear how much, if any, similar protection should be afforded a person who files a petition to designate lands unsuitable. The present draft of the regulations requires a petitioner to give his/her name in order to make the petition complete. The present draft of the regulations would afford some measure of confidentiality to a petitioner only if the petition were filed by an organization rather than an individual because an individual's name is not required where an organization files a petition.

OSM considered the alternative of not requiring the petitioner to state his/her name in a petition. This alternative was not adopted because the drafters did not believe that protecting the identity of the petitioner was authorized by the Act. The drafters believe there are countervailing concerns of providing due process for owners of coal whose use of the coal in an area proposed for designation would be affected versus providing some measure of protection for a citizen who exercises his right to petition under the Act. The drafters believe that it is extremely difficult to hide the identity of a petitioner. Attempting to do so might persuade some citizens to petition, believing that their identities were protected when, in fact, their identities might be revealed.

How to implement Section 522(a)(4)(C) which requires States to have, "a method or methods for implementing land use planning decisions concerning surface coal mining operations."

The Act requires each State to have as part of its designation process a method for implementing land use planning decisions concerning surface coal mining operations. It also provides in 522(a)(3)(A) that, where coal mining would be incompatible with land use plans, this incompatibility is grounds for granting a petition to have an area designated unsuitable for mining.

The present draft of the regulations requires only that in implementing a designation decision the regulatory authority not issue permits which would be inconsistent with designations.

This draft does not expand on the implied authority to require States to have land use planning authority because this is a much larger question than regulation of surface coal mining. Nationwide land use planning was rejected by Congress when it defeated proposed legislation for national land use planning. The drafters believe that the Act does not require that a State obtain land use planning authority, but only that it develop a method for implementing designation decisions.

This issue is also important in many States that have statutes prohibiting-*zoning* against mining, because zoning and land use planning are sometimes viewed as synonymous. The drafters of these regulations disagree with this view; instead the drafters maintain that zoning is only one method of implementing land use plans which can be implemented in a variety of ways such as tax policies, and purchasing and receiving easements. Although the drafters considered requiring States to repeal laws prohibiting zoning against mining, this alternative was rejected because the drafters believe zoning and land use planning are not synonymous.

Extent of the requirement for a State to establish a data base and inventory system.

The Act requires that, as part of the approved State program under Section 503(a), a State "must demonstrate that it has developed or is developing a process which includes. . . (B) a data base and an inventory system which will permit proper evaluation of the capacity of different land areas of the State to support and permit reclamation of surface coal mining operations" (522(a)(4))

The present draft of the regulations does not require a complete data base for State program approval and does not spell out detailed minimum requirements for a State data base and inventory system. Instead, this draft restates the language of the Act, provides for the data base to include information relevant to all the criteria to designate lands unsuitable, the Clean Air Act, information from the U.S. Fish and Wildlife Service, and information from State Historic Officers. For additional guidance, the States are referred to a Missouri River Basin Commission report, *Designating Areas Unsuitable for Surface Coal Mining: Preliminary Interpretation of Section 522 of Public Law 95-87* (Missouri River Basin Commission, May 1978). The regulations also provide for adding to the data base as new information becomes available from petitions, publications, experiments, permit applications, mining operations and other sources.

An alternative considered was requiring each State to have an on-line computer-based data system at the time the State applies for State program approval. The drafters rejected this alternative because of the difficulty in anticipating exactly what kinds of data would be required in each State and because of the expense to the State and to OSM. Under Part 740 of the regulations OSM will fund States to establish and maintain data bases. OSM does not intend to fund efforts which would duplicate existing data, however.

Another alternative considered was requiring each petition to be considered on a site-specific basis, with no burden on the State to compare the area proposed for designation with other similar areas in the State. The drafters rejected this alternative because it would not provide any way of comparing the value of the area proposed for designation with other similar areas in the State. The drafters believe there is a burden on the State to establish a measure of uniqueness for areas covered by petitions under the discretionary criteria of Section 522(a)(3). For example, if there is only one spruce bog within a State which also happens to be threatened by mining there would be more reason to designate that one spruce bog unsuitable for mining than if there were 100 spruce bogs within a State, most of which were not threatened by mining. A data base and inventory system should enable the State to measure the uniqueness of areas and resources proposed for designation.

Whether to require the regulatory authority to hold a fact-finding hearing or an adjudicatory hearing

The Act provides that the regulatory authority must hold a "public hearing in the locality of the affected area, after appropriate notice and publication of the date, time, and location of such hearing" (522(c)). The Act does not specify the type of hearing required but it does spell out the kinds of information required of a petitioner: "allegations of facts with supporting evidence which would tend to establish the allegations" (522(c).) Thus, the Act does not require the petitioner to establish at the outset that what is in the petition is fact, but only to provide allegations and supporting evi-

dence. This requirement therefore suggests that the hearing should be legislative and fact-finding, rather than adjudicatory. Consequently, the present draft of the regulations requires that the regulatory authority hold a legislative or fact-finding hearing. The drafters of the regulations believe a legislative hearing is consistent with the Act's threshhold requirement for the petitions.

An alternative considered was to require an adjudicatory hearing with cross-examination of witnesses. The drafters rejected this alternative because an adjudicatory hearing would be inconsistent with the threshhold for a complete petition.

The regulations place the burden of gathering facts on the regulatory authority. It must gather all the facts it can before making a decision on a petition. Under Section 764.19 the regulatory authority is required to use information from the data base and inventory system, information provided by other governmental agencies, an economic and environmental report under Section 764.17(b) and any other information submitted to the regulatory authority prior to or in connection with the public hearing in reaching a decision. Thus this draft places a burden on the regulatory authority to make a substantial case for its decision. If a decision is appealed, it is the regulatory authority which must defend that decision in administrative hearings or in court.

Another alternative considered was requiring the burden of proof to be placed on the petitioner. OSM rejected this alternative, believing that placing a burden of proof on the petitioner was inconsistent with the Act's explicit provision that a petitioner need only provide "supporting evidence which would tend to establish the allegations."(522(c).) With the large amount of discretion afforded the regulatory authority it makes little sense to place a burden of proof on the petitioner. However, under these regulations, the petitioner must meet the statutory burden of going forward and cannot trigger the process on nothing more than a request for designation.

How to define valid existing rights and substantial legal and financial commitments.

Section 522(e) of the Act states, "After the enactment of this Act and subject to valid existing rights no surface coal mining operations except those which exist on the date of enactment of this Act shall be permitted" on lands in certain Federal systems, on land which would adversely affect any publicly owned park or place included in the National Register of Historic Sites with certain exemptions, and within certain limits of public roads, occupied dwellings, public buildings, schools, churches, community or institutional buildings, public parks or cemeteries.

Valid existing rights has different meanings depending on whether the land in question is Federal land subject to the Federal mining and leasing laws or is private or State-owned land. The definition of valid existing rights in the proposed regulations reflects this distinction. For Federal lands, a valid existing right does not include having a permit to mine, but includes stages just short of a permit. For State lands a valid existing right includes having all necessary State and Federal permits.

The drafters considered not defining valid existing rights, but rejected this alternative because not defining the term would lead to inconsistencies across the nation. The definition adopted is consistent with Federal mining and leasing law and practice in many States.

Substantial legal and financial commitments applies to all the categories of designations mentioned in 522(a) where the substantial legal and financial commitments were established prior to January 4, 1977.

The drafters considered not defining "substantial legal and financial commitments" but rejected this alternative because a reading of the legislative history made it clear that Congress intended a specific meaning in using this term in the Act. *See: 121 Cong. Rec. 6114, March 11, 1975, p. 6120.*

What judicial review is required after State regulatory authority decisions on petitions.

The Act does not mention judicial review specifically in relationship to Section 522 of the Act, but states in Section 526 that "(e) Action of the State Regulatory Authority pursuant to an approved State program shall be subject to judicial review by a court of competent jurisdiction in accordance with State law."

This draft of the regulations provides for judicial review of questions of determinations concerning valid existing rights and substantial legal and financial commitment in order to settle whether or not certain lands are subject to the designation procedures or the Congressional designation under 522(e).

The drafters considered not requiring separate judicial review of valid existing rights and substantial legal and financial commitment. This alternative was rejected on the grounds that it would be to the advantage of all parties to have those questions settled separately from any designation or permit application proceedings.

Whether to develop criteria for when designations should be made because reclamation is not technologically and economically feasible.

Section 522(a)(2) of the Act requires the regulatory authority to designate an area unsuitable for all or certain types of surface coal mining operations if it determines that reclamation pursuant to the requirements of the Act is not technologically and economically feasible.

The present draft of the regulations does not contain any criteria for reaching this determination other than the language of the Act. The drafters believe there is a burden on State regulatory authorities to collect data relevant to reclamation feasibility for inclusion in the data base to use in these determinations.

The drafters considered developing special criteria for designations in the case of economic and technological infeasibility of reclamation, but decided against this approach because the technology and economics of reclamation are constantly changing, outdating any criteria developed at a fixed point in time. The drafters believe the language of the Act, the regulations, and approved State programs will provide sufficient guidance for making these designation decisions.

Whether to establish some thresholds for determining when the regulatory authorities would be required to designate areas unsuitable for mining under the discretionary criteria.

The Act states that designations pursuant to criteria under 522(a)(3)(A)(B)(C) and (D) are discretionary and should, to be considered "upon petition" and the language of the Act makes it clear that even where the regulatory authority acknowledges that coal mining would damage these categories of lands, it has discretion to disapprove a designation petition, allowing a permit applicant to pursue a permit under the standards established by the Act, the regulations, and an approved State program. The Act establishes no thresholds which would indicate where designations should be made, unlike 522(a)(2) which requires the regulatory authority to designate an area as unsuitable if it determines that reclamation is not possible.

The drafters considered adopting some threshold criteria for requiring a regulatory authority to make designations pursuant to 522(a)(3) but rejected this alternative for two reasons. There is no authority in the Act to do so and there are no threshold criteria which would apply nationwide. Instead of providing for threshold criteria, the Act requires States to adopt all the designation criteria under Section 522 and where discretion is provided under 522(a)(3), to use that discretion on a petition-by-petition basis.

Coordination of petitions for Federal-State areas, cross-State areas, and Indian lands and other areas.

The Act requires that the designation process must be part of every approved State program for non-Federal and non-Indian lands within each State. The Act specifically reserves the designation determinations on Federal lands to the Secretary of the Interior (523(c)) and makes no provisions for designations on Indian lands until the Secretary of the Interior has studied the question of the regulation of surface mining on Indian lands (710(a)).

These regulations are silent on coordination of petition processes for State, Federal, and Indian lands. The drafters solicit comment on this problem in order to ensure that the designation process is orderly and coordinated among the various categories of land ownership or management.

SUBCHAPTER G—SURFACE COAL MINING AND RECLAMATION OPERATIONS PERMITS SYSTEM

PART 770—GENERAL REQUIREMENTS FOR PERMIT SYSTEMS UNDER STATE PROGRAMS

§ 770.5 Definitions.

(1) The term "complete application" is defined to insure that appropriate distinction is made in this Subchapter between: (i) those permit applications which, although filed with the regulatory authority, do not contain all information needed for a final decision to approve or disapprove a permit; and, (ii) those applications which are full and complete for the purpose of a final decision by the regulatory authority.

The consequences of a "complete application" are important, since OSM proposes that the Subchapter's time constraints for action upon an application by the regulatory authority (see Parts 787, 788) begin only with the filing of a "complete application" and that only a "complete application" may be given final consideration for approval/disapproval of a permit. See Sections 510, 514(a) of the Act.

(2) The term "general area" is based upon the requirements of the Act at Section 507(b)(11) and 510(b)(3), that the regulatory authority conduct an assessment of the impact on the hydrologic balance of all anticipated mining in the "general area" around the proposed permit area, prior to issuing or denying a permit. As proposed, the term "general area" would, in general, be delimited according to "catalog units" derived from a national program administered by the Department's Office of Water Data Coordination (OWDC) within the U.S. Geological Survey (USGS). This program has resulted in the division of the United States into 2,100 separate geographical "catalog units," with about 700 of those units located in the coal mining areas of the country. Each "catalog unit" represents a separate surface water sub-basin. The "catalog units" are based on grouping of approximately equal sized surface water sub-basins, with approximately equivalent rainfalls within regional areas. Copies of all these maps are contained in the OSM administrative record and are being published in 1:500,000 maps of each State and will shortly be released by the USGS as a 1:750,000 map of the United States.

The "catalog units" selected are now being used as the basis for segregation of water quality and quantity data stored in the NAWDEX and WATSTORE programs of the USGS. Work is also underway to make the EPA's STORET water data storage system conformable with these units. In addition, the Geography Program of the USGS is publishing 1:250,00 land use maps of the United States which show the "catalog unit" boundaries for close correlation of landuse data and water data.

Papers contained in the OSM Administrative record under Section 701.5 provide further detailed information on the process used to develop the "catalog unit" concept.

As an alternative to the use of "catalog units," OSM considered using approximately 350 larger full basin-sized areas. Those larger units are now used as "accounting units" by the USGS. This alternative has tentatively been rejected, because, the larger units would not provide sufficiently small sizes for meaningful characterization of water quality and quantity data between separate units.

Another alternative considered was to segregate areas into units on the basis of the extent to which the surface waters overlay major coal seams. Due to the lack of any definite relationship between collection of data for determining surface water data characteristics and the extent of underlying coal seam locations, this alternative has also been tentatively rejected.

§ 770.12 Coordination with requirements of other laws.

Authority for this section is found in Sections 102; 201(c)(2), (6), (9), (12); 501(b); 503(a)(4), (6); 505; 508(a)(9); 510(c); 702(a), (b), (c); and 713(a) of the Act; the Endangered Species Act of 1973, 16 U.S.C. Section 1531 et seq; The Fish and Wildlife Coordination Act, 16 U.S.C. Section 661 et seq; The National Historic Preservation Act of 1966, 16 U.S.C. Section 470; Executive Order No. 11593; The Archaeological and Historic Preservation Act of 1974, 16 U.S.C. Section 461. This Section would implement the Act's mandate to avoid duplication and coordinate permit processes under State programs with permits and environmental planning processes required under other State and Federal laws.

It should be noted that, for the Clean Air Act and Clean Water Act, Sections 780.14, 780.19(i), and 784.12(j) of this Subchapter also require that it be indicated in the application how the relevant requirements of those laws will be complied with during the conduct of mining operations. For the requirements of the Endangered Species Act, National Historic Preservation Act, and Archaeological and Historic Preservation Act, specific additional provisions of Subchapter G would provide more detailed co-ordination requirements in the context of preperation, review and decision of permit applications. *See, e.g.,* Sections 779.12(b), 789.19(c), 779.20, 779.24(i), 780.13(b), 780.13(c)(13), 780.15, 780.23, 780.31, 783.12(b), 783.19(c), 783.20, 783.24, 784.16, 784.20, 784.22(b), 786.15(e) of this Subchapter.

PART 771—GENERAL REQUIREMENTS FOR PERMITS AND APPLICATIONS

§ 771.11 General requirements for permits—Operators.

Authority for this section is Sections 102; 201; 501(b); 502(d); 506(a); 515; and 516 of the Act. This Section would establish the requirement that no person conduct surface coal mining and reclamation operations without a valid permit issued under a regulatory program, on or after eight months from approval of a program, except in the limited circumstance covered by Section 771.13. Section 771.11 is proposed to implement particularly Sections 102 (b), (c), (d), (e) and 506(a) of the Act, so that mining is not conducted under regulatory programs, until after the regulatory authority has determined that the operations will be conducted in compliance with the applicable environmental protection performance standards of Subchapter K.

The Office is aware that the requirement that permits be obtained within eight months from approval of a State or Federal program will make it necessary for those States which obtain approvals of State programs to process large volumes of applications in a short period of time after the date of approval. The Office recognizes the burden that this will place on the industry, the State regulatory agencies, and the public. However, this requirement is expressly mandated under Sections 502(d) and 506(a) of the Act.

§ 771.13 Continued operation under interim permits.

Authority for this section is found at Sections 102 (a), (c), (d), (e); 201(c);

501(b); 502; and 506(a) of the Act. This section is proposed to implement the provision for the exception in Section 506(a), whereby a person may continue to conduct surface coal mining and reclamation operations under a permit issued under the initial regulatory program, for the time after the deadline established at Section 771.11 of this Subchapter. This limited extension of time would be available only during the time which the regulatory authority may take to complete processing and review that person's application for a permit under the permanent regulatory program.

Appropriate conditions for the utilization of this exception are proposed to insure both that: (1) exceptions are not abused by persons conducting operations out of compliance with the requirements of the interim program and (2) that they do not attempt to avoid indefinitely the requirements of the permanent regulatory program.

§ 771.15 Continued operations under Federal program permits.

1. Authority for this section is Sections 102; 201(c); 501(b); 504(f); 505; 515; and 516 of the Act. This section is proposed primarily to implement the provisions of Sections 504(f) and 505 of the Act, whereby persons who obtain permits under a Federal program would be allowed to continue operations under those permits after a State program is approved by the Director under Part 732 of Subchapter G, to supercede a Federal program. As provided in Section 504(f) of the Act, Section 771.15 of the regulations would authorize persons who had been issued permits by the Federal program regulatory authority to obtain a substitute permit from the State regulatory authority.

In addition, the State regulatory authority could, subject to procedural safeguards, require persons continuing to operate under Federal permits to obtain revised permits, principally to incorporate additional, more stringent requirements of State laws that may not have been included in the Federal program.

2. *60-Day time limit.* The Office interprets Section 504(f) of the Act to require that the regulations now being proposed specify a time limit within which persons required by the States to meet additional requirements of the State program, after withdrawal of a Federal program, must achieve compliance with the program elements involved. As proposed, Section 771.15 would generally establish a 60-day time period for those compliance obligations, with provisions for extensions of that limit based either upon a showing by the permittee that it was physically impossible to meet a 60-day limit, or, an agreement by the State regulatory authority to a longer period under an established time schedule.

The Office emphasizes that the provision for a 60-day period is only tentative and specifically solicits comments on how this time limit can be alternatively established under Section 504(f) of the Act. In particular, the following alternatives for resolution of this issue will be considered:

(a) Whether OSM should specify a shorter or longer general time limit than 60 days?

(b) Whether OSM should specify that extensions of the time limit may not be allowed?

(c) Whether OSM should restrict extensions to showings of physical impossibility only?

(d) Whether OSM should require that any extension be based on an enforceable State judicial or administrative order and/or include assessment of civil penalties against the operator for the term of the extension?

3. *Hearing requirement.* As proposed, this Section would require that a permittee be provided with an adjudicatory hearing, if additional requirements are to be imposed under the State program. However, this decision is only tentative and the Office solicits comments on whether the hearing required by Section 504(f) of the Act may be legislative rather than adjudicatory. Additionally, the Office solicits comments on whether procedural rules for these hearings, either adjudicatory or legislative, should be specified.

§ 771.17 Compliance with permits.

Authority for this section is Sections 102; 201(c), 501(b); 503(a); 506; 510; 515 (a), (b); and 516 (a), (b) of the Act. This section is proposed to insure that each surface coal mining and reclamation is conducted in compliance with the full range of regulatory requirements established under the Act, including this Chapter, the regulatory program, and the term and conditions included in each permit.

§ 771.19 Permit application filing deadlines.

This section sets forth time tables for filing permit applications with the regulatory authority under an approved regulatory program.

Subsection (a) would implement the deadlines found in Sections 502(d) and 506(a) of the Act. Under Subsection (a), if an operator expects to be mining eight months or more from the time of the approval of a regulatory program, he would have to submit an application for a permit under that program no more than two months after the approval of that program by the Secretary.

Under paragraph (b)(1), a general requirement for all applications is established. This period is left to the reasonable exercise of the regulatory authority's discretion, except that the regulatory program would have to insure that applications be filed far enough in advance of issuance of the permit as to allow for complete compliance with all requirements of this Subchapter.

Under paragraph (b)(2), applications for permit renewals would have to be filed 120 days before the expiration of the original permit, as expressly provided for in Section 506 of the Act. Under paragraph (b)(3), applications for a revision to a permit would have to be filed at least six months before the expected revision, if possible, so as to allow for enough time for compliance with processing requirements. This six months period is based upon an estimation of the average time it would take the regulatory authority to process an application for a revision, allowing for full opportunity for the public participation required by the Act (e.g., newspaper advertisements, opportunity to submit comments/objections, informal conferences).

§ 771.21 Permit application—General requirements for format and contents.

1. Authority for this section is Sections 102; 201; 501(b) 503(a); 504; 507; 508; 510; 515 and 516 of the Act. This section would provide general requirements for all applications for permits under regulatory programs. Applications would be required to contain legal, financial and compliance information, existing site and adjacent area environmental resources information, and reclamation and operation plans. The environmental resources and reclamation and operations plan portions of applications would be required to contain written narratives, maps, cross-sections and other visual displays, cross-referenced to each other. Technical data submitted would have to be referenced and verified, so that the regulatory authority could evaluate the quality of the information. All institutions and governmental agencies consulted by the applicant in preparing the application would be listed, so that the information contained in the application can be easily checked and verified by the regulatory authority.

As is indicated in subsection (a), the Office is proposing to promulgate regulations which segregates requirements for the detailed information required in permit applications into three separate parts for both surface and underground mining activities. These parts are 778 to 780 for surface mining and Parts 782 to 784 for underground mining.

Parts 778 and 782 would contain detailed requirements for non-technical, legal, financial, compliance and other general information. Parts 779 and 783 would contain the requirements for information to describe the proposed permit area, mine plan area and adjacent areas, as they exist prior to mining, so that the regulatory authority is provided with an adequate baseline against which to assess the impact of the proposed operations upon those areas through the information in the operations and reclamation plan filed under Parts 780 or 784.

2. *Level of detail required in applications.* The Office recognizes that these regulations contain requirements that would be quite detailed and comprehensive. As a general matter, many of these requirements are expressly required by the Act, either specifically at Sections 507 or 508, or because Section 510(b) of the Act mandates that the regulatory authority have before it, prior to a final decision on an application, sufficient information upon which to assess whether the detailed requirements of the performance standards of regulatory programs can be complied with during proposed mining operations. The Office does not believe that it has discretion to waive either of these requirements. Congress has provided OSM with no authority for the issuance of variances on a general basis from the requirements of the Act. *Surface Mining Regulation Litigation,* 11ERC 1593, 1599-1600 (D.D.C. 1978) (disposition of motions for preliminary injunctions); *Surface Mining Regulation Litigation, * * * F. Supp. * * * (D.D.C., 1978)* (Disposition of Motions for Permanent Injunction) (*Mem. Op. at 3, 7, 16*).

Where the Office has been provided with discretion as to permit application requirements, it has considered what level of detail and what quantity of information should be required, on a national basis, to be included in permit applications. Accordingly, many provisions of Parts 778-784 allow for case-by-case determination of the level of detail and quantity of data that will be needed for particular permit applications.

The Office emphasizes that the requirements proposed in Parts 778-780 and 782-784 are tentative and specifically solicits comments on how these requirements can be most easily borne by the States and industry, while at the same time insuring that applications are fully adequate to fulfill the requirements of the Act. The Office is especially interested in comments regarding what level of detail should be required in certain applications by small operations and how to define "small operator" for those purposes.

3. Under Section 785.16 of the permit regulations, a person who qualifies may obtain a variance in steep-slope areas from the requirement to restore the land to approximate original contour. Such a person must also obtain a permit to mine under that section.

Because such operations will result in "industrial, commercial, residential, or public use (including recreational facilities)," the full range of permit and reclamation plan requirements may be unnecessary and may be an impediment to the acomplishment of the beneficial post-mining land use when the area is small and the economics of the change marginal. OSM will consider adopting regulations providing for a simplified permit application process, which will ease the application burden on the developer, while still insuring that permits are issued in full compliance with the Act.

OSM has not yet drafted proposed regulations to accomplish this. Its present analysis is that those regulations would include and exclude the following elements of the full-scale permit process.

Include	Exclude
Part 778	None
Part 779, except Sections 779.20, 779.26	779.18, 779.19, 779.21 779.24(f),
Part 780, except	780.14, 780.15, 780.19(d), (e)-(h), 780.21(b)(3), (4), 780.37
Part 785 (as applicable), especially Section 785.16.	

OSM solicits comments on whether such a shortened permit procedure is legal, desirable, and, if so, to what type of operations it should apply and what form the shortened permit procedure should take.

4. A concern related to the level of detail to be required in applications was that expressed by some commenters who have suggested that, for small operators, the regulatory authority itself finance and develop the application in full. This alternative has been rejected, first, because, except for the limited purposes authorized under Section 507(b)(17) of the Act and Part 795 of this Subchapter, the Act does not appear to allow for the expenditure of funds under the Act to finance the development of permit applications. Moreover, the Act contemplates that the regulatory authority will review applications developed by the applicant, thereby avoiding a conflict-of-interest in deciding whether the permit should be issued. See Sections 507, 508, 510 of the Act.

§ 771.23 Copies required.

As proposed, this section would leave to the discretion of the regulatory authority, either by rule or case-by-case determination, the number of copies of an application which must be filed with it.

§ 771.25 Permit fees.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; and 507(a) of the Act. This section would implement the requirement of Section 507(a) that fees for permit applications are not to exceed the actual costs of processing, administering and enforcing such permits.

The Office has considered whether Section 507(a) and other relevant sections of the Act impose a floor on the amounts of permit fees that may be charged by regulatory authorities under regulatory programs. Tentatively, the Office believes that the answer to this issue is found in the unambiguous language of Section 507(a), which provides that: "(e)ach application for a * * * permit * * * shall be accompanied by a fee.* * *" (emphasis added). Accordingly, Section 771.25 would require that regulatory authorities charge a minimum permit fee, determined according to the particular requirements of each regulatory program.

For State programs, those requirements are specified in Subchapter C. For Federal programs, specific fee amounts and collection systems would be proposed under the particular Federal program regulations adopted pursuant to Part 736 of Subchapter C, based on the number of mines and expenses to the Office involved in specific States for which Federal programs would have to be implemented.

§ 771.27 Verification of applications.

Authority for this section is found at Sections 102; 201(c); 501(b); 503(a); 504; 507, 508 and 510 of the Act. This section is proposed to insure that all applications contain only that information upon which the applicant is prepared to rely, that the applicant retain ultimate responsibility for representations made in applications, and that applicants be fully cognizant of the obligations they propose to undertake by making applications, should a permit be issued in response to the application.

PART 776—GENERAL REQUIREMENTS FOR COAL EXPLORATION OPERATIONS

Introduction

This part is being proposed to implement the requirements of Section 512 of the Act for the regulation of coal exploration operations on non-Federal and non-Indian lands within States under regulatory programs. Part 776 generally provides for procedures and general standards for the initiation and conduct of these operations. Part 776 is complemented by Part 815 of

Subchapter K, which provides proposed environmental protection performance standards applicable to these operations.

The Office is proposing a two-tiered system of procedures which depends upon whether the exploration operation results in the removal of more or less than 250 tons of coal from the exploration area. Neither of the tiers provides for the implementation of a "permit" system, as the Office believes that Congress did not intend that a "permit" as defined in the Act be required for coal exploration. Although Section 512 of the Act is captioned "Coal Exploration Permits," an analysis of the text of Section 512 and its legislative history reveals that Congress, in finally passing SMCRA did not appear to require "permits" for these operations. *See* H.R. Rep. 95-218, 95th Cong., 1st Sess. 61, 173 (1977).

Section 512(a) of the Act generally requires persons conducting coal exploration operations to file a "notice of intention to explore" with the regulatory authority prior to commencing an exploration operation. While subsection 512(a), makes environmental protection standards applicable to such operations, it contains no provision, however, for mandatory regulatory action following receipt of notices of intention to explore. Instead of a uniform permit system, Congress substituted a requirement for prior approval of the regulatory authority only for coal exploration operations involving the removal of more than 250 tons of coal (Section 512(d) of the Act). This is consistent with the policy articulated by the House Committee in eliminating the general permit system to aid small operators. Under Section 512(d), the Office believes Congress did intend that larger exploration operations be carefully scrutinized by the regulatory authority prior to the initiation of those operations.

To implement fully Congress' intent expressed in Sections 512(a) and (d), the Office is proposing to require, first, filing of only a notice of intention to explore for operations which will remove less than 250 tons of coal and, second, prior approval by the regulatory authority for operations removing more than that amount. Detailed explanation of the relevant sections of the proposed regulations follows.

§ 776.4 Definitions.

This section would provide a definition for special use in Part 776. The term "reclamation" is proposed to be specifically defined for Part 776, to distinguish it from the definition of "reclamation" proposed at Section 701.5 of Subchapter A which is applicable to "surface coal mining and reclamation operations." The basis of the definition for "reclamation" for Part 776 is the Office's belief that Congress intended that this term be broadly defined to reflect the full range of responsibilities which persons subject to regulation under the Act must undertake to protect the environment. See Sections 101(c), (e); 102(c), (d); 701(27) of the Act.

§ 776.11 General requirements: Exploration operations of less than 250 tons.

Authority for this section is found at Sections 102(a), (b), (c), (d), (e), (i); 201(c); 501(b); 503(a); 504; 512(a), (b) and (d) of the Act. This section would cover exploration operations which are to remove less than 250 tons of coal and is proposed to implement the requirements of Section 512(a) of the Act. Under this section, persons would be required to file a written notice of intention to explore which would include a map, the period of time of the intended exploration, the basis of the right to enter the property for exploration and a statement of measures that will be taken by the exploring entity to protect the environment.

This information is necessary so that the regulatory authority and the public will know where and how these operations will be conducted. Provision is made to insure that information entitled to confidential treatment under Section 512(b) of the Act is protected, if contained in the notices.

The proposed requirement for including with the notice a statement of measures that will be taken to protect the environment is not intended to require regulatory approval like a permit application, as the operations covered by this section do not need to receive such prior approval. The statement is, instead, intended to be required for review by the regulatory authority to determine whether close surveillance of the actual operation will be needed in the field and so that the affected public is provided with an explanation of potential disruption to the environment.

§ 776.12 General requirements: Operations of more than 250 tons.

Authority for this section is found in Sections 102(a), (b), (c), (d), (e), (i); 201(c); 501(b); 503(a); 504; 512(a), (b), (d); and 515 of the Act, the Endangered Species Act of 1977 (16 U.S.C. 1531 *et seq.*), and regulations adopted under the Endangered Species Act. This section of the proposed regulations would implement the requirements of Subsection 512(a) and (d) of the Act by requiring persons who plan to undertake coal exploration operations involving more than 250 tons of coal to obtain prior, written approval from the regulatory authority.

In order to obtain that approval, the filing of a written application with the regulatory authority would be required. It is intended that this application would provide sufficient information for the regulatory authority to determine whether the criteria of Section 776.13 for approval or disapproval of the application will be met. Included within the minimum types of information which would be required to be contained in applications for approval is identification of both the person making application and the agent of that person who will actually be responsible at the site of exploration, so that the regulatory authority can have a readily available contact, if problems arise with the operation in the field.

The focal point of the application would be the exploration and reclamation operations plan. Information would be required in the plan to describe the existing environmental resources within the proposed exploration area, so that the regulatory authority would have a sufficient baseline upon which to assess the impacts of the proposed operations. Included within the existing site description would be information on those types of environmental resources that may be significantly affected by exploration, particularly surface water features, important fish and wildlife, special historical and cultural resources and the existing land-use of the area.

To explain how the operations will be conducted, the plan would have to provide information on the method of proposed operation, estimated amounts of coal to be removed, reclamation steps to be taken, reclamation schedules to be followed and a description of the legal basis and purpose of entry into the exploration area. This information is needed so that the regulatory authority can assess whether the proposed operations would be conducted according to the environmental protection performance standards of Part 815 of Subchapter K.

Under subsection 776.12(b), public participation in the process of approval and disapproval of applications regarding coal exploration and reclamation operations would have to be provided. This subsection is designed to implement Sections 102(i) and 517 of the Act by providing for fully informed decisions on applications by the regulatory authority. The required procedures are public notice of the filing of the application and the right to submit written comments on the application. The time-limits for the filing comments would be determined under the regulations of the particular regulatory program.

The Office emphasizes that the specific requirements for the contents of applications for approval and public participation are tentative only and specifically solicits comments on both

of these matters, particularly as to the level of detail needed for adequate plans and whether additional or alternative public participation procedures, such as opportunity for an informal conference prior to approval or disapproval of the application, should be included in the final rules.

§ 776.13 Application: Approval or disapproval.

Authority for this section is Sections 102, 201(c), 501(b), 503(a), 512, 515, 517 of the Act; Section 4 and 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*); the National Historic Preservation Act of 1966 (16 USC 470 *et. seq); and regulations adopted under the Endangered Species Act.*

This section is proposed mainly to implement Sections 512 (a) and (d) of the Act by specifying criteria for approval or disapproval of applications for conducting coal exploration operations submitted under Section 711.12. The principal criterion would be that, from information contained in the application, the regulatory authority must find whether the operations will comply with the performance standards of Part 815. In addition, findings must be made that interests covered under the Endangered Species Act and the National Historic Preservation Act of 1966 will be adequately protected.

Burden of proof. Under this subsection, the burden of proof would be placed upon the person seeking approval for several reasons. First, general principles of administrative law ordinarily provide for allocating the burden in this fashion. See, *e.g.,* Administrative Procedures Act, 5 U.S.C. 556(d). Second, it is the party in possession of the relevant facts, in this case the applicant, that should be required to bear the burden of persuasion of those facts. Third, the Office believes that, generally under the Act, Congress intended for persons seeking to develop coal mineral resources to bear the burden of establishing that this development would be conducted so as to protect the environment adequately. See, *e.g.,* Sections 102 (c), (d); 510(a)(b); 515(b)(A)(iii) of the Act.

Under subsection 776.13(c), authority is provided for conditioning approvals in order to enable the regulatory authority to tailor environmental protection performance standards to the specifics of the particular exploring entity and site.

§ 776.14 Applications: Notice and hearings.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 512; and 517 of the Act. This section is proposed to provide for public notice by the regulatory authority of its approval or disapproval under Section 776.13 and for the regulatory authority to allow for a public hearing on its decisions.

The time-limit for requesting and the manner for conducting the hearing, if the regulatory authority decides to allow one, would be left to the discretion of the States under State programs and to the particular requirements of a specific program under Federal programs. The Office will consider whether, alternatively, detailed requirements for the conduct of the hearings should be established in the final rules, similar to those proposed under Part 789 of this Subchapter to implement Section 514 of the Act. Accordingly, the Office specifically solicits comments on the extent to which such requirements should be included in the final rules.

§ 776.15 Coal exploration operation compliance duties.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 512; 515; 517; 518; and 521 of the Act. Subsection 776.15(a) is proposed to establish the enforceable legal requirements that will be applicable to persons conducting coal exploration operations under regulatory programs. Subsection 776.15(b) is proposed to implement the provisions of Section 512(c) of the Act. Under this subsection, persons conducting coal exploration operations are subject to the full range of sanctions available for violations of applicable legal standards under Section 518 of the Act and the regulations in Subchapter L of this Chapter. Those sanctions include civil penalties for violations of the Act and the regulations or issuance of notices and orders under Section 521 of the Act or a State program. In addition, criminal penalties may be imposed. The standards for acceptable minimum requirements for State program provisions for these sanctions are contained at Part 842 of Subchapter L.

§ 776.17 Public availability of information.

Authority for this section is in Sections 102; 201(c); 501(b); 503(a); 512; and 517 of the Act. This section is proposed principally to implement the provisions of Sections 504; 512(b) and 517(f) of the Act.

Under Section 517(f) of the Act, a general rule is established for information obtained by the regulatory authority. It requires that all such information is ordinarily to be made reasonably available for public inspection and copying, in keeping with the purposes of the Act as expressed at Section 102(i) of the Act. Given this rule, information obtained by the regulatory authority for coal exploration activities conducted under Parts 776 and 815 should generally be made available to the public.

A specific exception to this rule is required by Section 512(b) of the Act, which provides for the confidential treatment of certain information submitted to the regulatory authority for the purposes of protecting a private entity's competitive rights. Section 776.15 is proposed to protect precisely the type of information protected by the statute. In addition, a provision is proposed for administrative procedures to identify and segregate from non-protected information that information which is entitled to protection under Section 512(b) of the Act.

PART 778—SURFACE MINING PERMIT APPLICATION—MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Introduction

Part 778 is intended to set forth the minimum requirements under regulatory programs for non-technical information in permit applications. Information which would be submitted in permit applications under Part 778 would be primarily for the purpose of enabling the regulatory authority and interested members of the public to ascertain the particular nature of the entity which will mine the coal and those entities which have other financial interest and public record ownership interests in both the mining entity and the property which is to be mined. In addition, certain other non-technical information needed for processing and approval/disapproval of the application would also be required.

§ 778.5 Definitions.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); and 507(b)(4) of the Act. This section provides the definition of the term "principal shareholder" which is used in several places in Part 778. The definition is based upon the use of the term "shareholder" in Section 507(b)(4) of the Act, which specifies that permit applications are to identify persons "owning of record 10 percent or more of any class of voting stock." This would be set forth in Section 778.5, in order to avoid repetition of the entire phrase through the rest of the text of the regulations.

§ 778.11 Applicability.

Authority for this section is Sections 102(a); 201(c); 501(b); 503(a); 504; 507(b), (e), (f); 508(a); 510(a), (b), and (c) of the Act. This section explains that Part 778 would apply to permit applications for surface coal mining activities under regulatory programs and not for underground coal mining activities. The corresponding part for underground mining is Part 782 of this Subchapter.

§ 778.12 General.

Authority for this section is Sections 102(a); 201(c); 501(b); 503(a); 507(b), (e), (f); 508(a); 510(a), (b), and (c) of the Act.

§ 778.13 Identification of Interests.

Authority for this section is, in general, Sections 102(a), (b), (c), (d), (e); 201(c); 501(b); 503(a) and 504 of the Act.

The information to be required in applications under Subsection 778.13(a) would be based upon the requirements of Section 507(b)(1) of the Act. Subsection 778.13(a), as proposed, would call for three additional items of information:

First, the equitable owner of record of the property to be mined would have to be named in the application, in order to enable the regulatory authority to locate easily such owners if their interests would be adversely affected by the proposed operations and, in the event of a violation of applicable regulations during the mining process, to locate potentially responsible parties. This requirement should not pose an additional burden on applicants as equitable owners of record could be identified by the same process of searching public property records and at the same time as for legal owners of record which is expressly required by Section 507(b)(1).

Second, the resident agent of the applicant within the state of proposed operations would have to be identified, so that the regulatory authority would have readily identifiable and locatable individual for the purpose of accepting service of legal process during the permit application stage or the operating phase. Most States have similar requirements as a pre-requisite for businesses organized outside the State to conduct business. It should not pose an additional burden on permit applicants.

Third, in order to aid in locating and discussing permit applications and problems which may arise during the conduct of mining operations, the regulatory authority would have to be provided with the telephone number of the entities to be listed in subsection (a).

Subsection 778.13(b) is proposed to implement Section 507(b)(4) of the Act. Subsection 778.13(c) is proposed to implement Section 507(b)(1)(F) of the Act. Subsection 778.13(d) is based upon Section 507(b)(4) of the Act. It would require identification of both, any existing or prior coal mining permits held by the applicant anywhere in the United States and any pending permit applications. Identification of those permits or applications would be required to aid the regulatory authority in contacting those other permit-issuing authorities in other locations. As the applicant will already have that information in its possession, these requirements should pose no additional burdens.

In addition to requiring identification of prior permits and pending applications of the applicant, Subsection 778.13(d) would also require the same information for the entities to be listed in the application under Section 507(b)(4) of the Act and paragraph 778.13(b)(3) of this Subchapter. Those entities are persons who are in a position to exercise significant control over the conduct of an applicant's business affairs and who could be responsible for violations of law incurred by the applicant, for which the applicant is responsible under Section 510(c) of the Act. As a result, information about those persons' histories of compliance with permit obligations would be relevant and useful to the regulatory authority. Because that information would be in the possession of persons who would be closely associated with the applicant, requiring the applicant to produce that information should not pose a significant burden on the industry.

Subsection 778.13(e) is proposed to implement Section 507(b)(2) of the Act. The term "contiguous to" would be used in this section to limit the area around the proposed permit area for which owners of record must be identified, in accordance with the legislative history of Section 507(b)(2).

Subsection 778.13(f) is proposed to aid the regulatory authority in coordinating review of the permit application with the Mine Safety and Health Administration (MSHA), so that any potential conflicts between the regulatory requirements of the Mine Health and Safety Act and the Surface Mining Control and Reclamation Act could be resolved. In addition, identification of the MSHA number will be important in the case of a proposed new coal mine which might constitute a "new source" under the Clean Water Act, 33 U.S. Code 1251, *et seq.*

§ 778.14 Compliance Information.

Authority for this section is, in general, Sections 102; 201(c); 501(b); 503(a), 504 and 507(b) of the Act. Subsection 778.14(a) is proposed to implement Section 507(b)(5) of the act. Subsection 778.13(b) is proposed to implement the requirement under that section of the Act for "a brief explanation of the facts involved." As the Office interprets this provision of the Act, the information regarding suspension, revocation or forfeiture of a permit or mining-related bond or similar security would be relevant to a possible determination, under the provisions of Section 510(c), that a permit not be issued if the applicant has a past history of a pattern of non-compliance with the Act, resulting in substantial and irreparable environmental harm. The information which would be required under Subsection 778.13(b) is designed to insure that a complete understanding of the background of each suspension revocation or forfeiture could be obtained by the regulatory authority.

Subsection 778.14(c) is proposed to provide for the submission to the regulatory authority of the facts needed for determining whether the applicant has met the criteria of Section 510(c) of the Act regarding non-abated violations of any State or Federal air, water or other environmental protection statutes with respect to coal mining operations. As proposed, the list of violations would be limited to those which have been incurred by the applicant in a three (3) year period prior to the date of the application, as specified in Section 510(c) of the Act. In addition, Subsection 778.14(c) would require certain information regarding the origin and subsequent history of each violation identified, so that the regulatory authority can obtain a full and complete understanding of the current status of those violations, prior to making the determination required under Section 510(c) of the Act.

§ 778.15 Entry and Right of Entry and Operation Information.

This section is based upon Sections 102; 201(c); 501(b); 503(a); 507(b)(9); and 510(b)(6) of the Act. Subsection 778.15(a) is proposed to implement Section 507(b)(9) of the Act, requiring that the application contain a statement of the documents upon which the applicant bases the legal right to enter and commence mining operations on the permit area and a statement whether that right is the subject of pending court litigation. In addition, the regulatory authority may require copies of those documents in order to resolve a dispute of fact about whether a legal right claimed by the applicant exists. Of course, because of the proviso clause in paragraph 507(b)(9) of the Act, such a determination of fact would not mean that the regulatory authority was making a legal determination about the right to entry.

The Office has considered whether to require submission with the application of copies of these documents in all cases, as opposed to the routine requirement for a summary description of the documents. Tentatively, the former alternative has been rejected because of the costs of obtaining verbatim copies of these documents in cases where they would not be needed by the regulatory authority because no property dispute existed.

Subsection 778.15(b) is proposed to implement Section 510(b)(6) of the

Act, so that the regulatory authority is provided with the information necessary to make the finding required by that section of the Act.

§ 778.16 Relationship to Areas Designated Unsuitable For Mining.

The authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 510(b)(4); 522 (a), (c), (e)(5), of the Act. Under Section 510(b)(4) of the Act, the regulatory authority is required to make a finding, prior to the issuance of a permit, that the proposed permit area is not within an area designated unsuitable for surface coal mining under Subsection 522 (a) and (d) of the Act. In addition, Section 510(b)(4) precludes the issuance of a permit where a proceeding has been commenced under a process inaugurated under Section 522 (a) and (d) of the Act, to determine whether the proposed permit area is unsuitable.

Subsection 778.16(a) is proposed to provide the regulatory authority with information in the application regarding such unsuitability determination or related pending proceeding. Subsection 778.16(b) is proposed to provide the regulatory authority with information upon which it can determine whether an applicant is entitled to an exemption under Section 510(b)(4) of the Act from the general requirements of Section 510(b)(4), where the applicant can prove that it has made substantial legal and financial commitments prior to January 4, 1977, in relation to the proposed operations. The substantive standards upon which the regulatory authority would decide the issue of entitlement to this exemption are proposed in Subchapter F relating to designation of areas unsuitable to mining. Subsection 778.16(c) is proposed to provide the regulatory authority with the information necessary to allow for the surface mining of coal under the exemption to the general preclusion of mining within 300 feet of an occupied dwelling under Section 522(e)(5) of the Act and Part 761 of Subchapter F.

§ 778.17 Permit Term Information.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 506(c); and 507(b)(8) of the Act. Subsection 778.17(a) is proposed to implement the requirements of Section 507(b)(8) of the Act. A regulatory authority would need this information, in general, to establish the term of the permit, pursuant to the requirements of Section 506(c) of the Act and proposed Subsection 786.11(b) of this Subchapter. In addition, this information, together with the mapping information required under Parts 779 and 780 of the proposed mine plan area, would be used by the regulatory authority to delineate "permit areas" within the "mine plan area," for each phase of the proposed operations over the estimated life of the mine.

Under Section 506(c) of the Act, a permit may be issued for a term beyond the standard maximum of five (5) years, based upon a demonstration that the applicant meets certain special criteria. Subsection 778.17(b) is proposed in order to make a determination of whether an applicant meets those criteria, as provided in Subsection 786.11(a) of this Subchapter. Particular use of this section would also be intended under applications for concurrent surface and underground mining operations, pursuant to the requirements of Section 515(b)(16) of the Act and Section 785.18 of this Subchapter.

§ 778.18 Personal Injury and Property Damage Protection Insurance Information.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; and 507(f) of the Act. Under Section 507(f) of the Act, an applicant for a permit is required to have certain personal injury and property damage insurance or self-insurability capabilities. Substantive criteria implementing that section of the Act under these regulations are proposed at Section 806.13 of Subchapter J. Section 778.18 is proposed to insure that the regulatory authority would be provided with evidence establishing that the applicant has complied with the requirements of Section 806.13, as required by the Act.

§ 778.19 Identification of Other Licenses and Permits.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 505; 508(a)(9); 510(c); 702; and 713(a) of the Act. This section is proposed in order to provide the regulatory authority with a complete description of all permits and licenses needed by the applicant to conduct the operations in question under Federal and State laws other than the Act. This information would be needed so that the regulatory authority could insure that the operations, as proposed, would not be inconsistent with the requirements of those other statutes and laws, to enable the regulatory authority to utilize the expertise of other governmental agencies involved in reviewing and approving the proposed operations, and to avoid duplication of effort in the collection and analysis of technical information which may have already been collected or analyzed by another permitting or licensing agency.

§ 778.20 Identification of Location of Public Office for Filing of Application.

Authority for this section is Sections 102 (a) and (i); 201(c); 501(b); 503(a); 504; 507(b)(6) and 507(e) of the Act. Under Section 507(b)(6) of the Act, the applicant must identify, in the permit application, the location of where the application will be made available for public inspection as required under Section 507(e) of the Act. Section 778.20 is proposed to implement section 507(b)(6).

§ 778.21 Newspaper Advertisement and Proof of Publication.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 507(b)(6); 507(e); and 513(a) of the Act. Under Section 507(b)(6) of the Act, the applicant is required to set forth in the permit application a copy of the newpaper advertisement announcing the filing of the permit application. The minimum standards for acceptable newspaper advertisements would be provided at Section 787.11 of this Subchapter.

Section 778.21 is proposed to implement the requirement of Section 507(b)(6) that a copy of the newspaper application and proof of publication of same be set forth in the permit application. However, inasmuch as Sections 507(b)(6) and 513(a) of the Act do not require completion of publication of the newspaper advertisement until, at a minimum, four (4) weeks after the application has been filed, Subsection 778.21(b) would require only that the copy of the advertisement and proof of publication be filed after the last date of required newspaper publication.

As proposed, copies of the advertisement and proof of publication are to be filed within one week after the last date of newspaper publication. One commenter suggested that this be changed to four weeks, because of alleged delays experienced by the commenter in obtaining proofs of publication from newspapers in rural areas. The office has decided not to adopt this suggestion yet, as it is not clear whether the commenter's experience represents general experience of the industry. Comment is specifically solicited on this problem.

PART 779—SURFACE MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR INFORMATION ON ENVIRONMENTAL RESOURCES IN THE PERMIT AND ADJACENT AREAS

Introduction

This Part is proposed to establish the minimum requirements for regulatory program provisions on the information on environmental resources within a proposed mine plan area and adjacent area which must be assembled and submitted to the regulatory authority for surface mining activities. This Part corresponds to Part 783 for underground mining activities. It would provide for submission to the

regulatory authority of enough information to enable it to determine, together with the information required under Part 780, what impacts the proposed operations would have on areas within the mine plan area and adjacent areas and whether those operations will be conducted according to the requirements of Part 816 of Subchapter K.

The general structure of this Part has been prepared to describe these information requirements in the following format:

Section 779.11: general pre-mining environmental assessment requirements;

Section 779.12: environmental resource data;

Section 779.13: general requirements for geology and hydrology;

Section 779.14: descriptions of geologic features;

Section 779.15: groundwater hydrology and geology;

Section 779.16: surface and groundwater information;

Section 779.17: alternative water supply information;

Section 779.18: climatological and air quality data;

Section 779.19: vegetation data;

Section 779.20: fish and wildlife resources;

Section 779.21: overburden analysis and topsoil mixtures;

Section 779.22: land use descriptions;

Section 779.23: preparation of maps, plans and cross-sections;

Section 779.24: general map requirements;

Section 779.25: cross-section, maps and plans;

Section 779.26: soil resources descriptions.

§ 779.11 General requirements.

Authority for this section is Sections 102; 201(c); 501(b); 503; 507 (b), (c), (d); 508(a); 510(b); 515; and 522(e) (3), (4), and (5) of the Act; the Endangered Species Act of 1973; Fish and Wildlife Co-ordination Act of 1966; Executive Order 11593; and the Archeological and Historic Preservation Act of 1974. This section presents general requirements for permit applicants to present adequate descriptions of the existing pre-mining environmental resources within and around the proposed mine plan area. This information will enable the regulatory authority to determine whether the applicant can comply with Part 816 of Subchapter K and whether reclamation of those areas will be feasible.

§ 779.12 General environmental resources information.

1. Authority for this section is found in Sections 102; 201(c); 501(b); 503; 507; 508; 508(a)(5); 510 and 522 of the Act.

2. Paragraph (a) would require identification of lands to be mined over the life of the mining operation and the timing of mining as it progresses. Specific authority for this is Sections 507(b)(8) and 508(a)(1) of the act. Paragraph (b) would aid in a similar determination as to Part 816 in general and for determining performance bond requirements under Subchapter J.

3. Paragraph (b) would require identification of the location of certain important cultural, pre-cultural, and natural phenomena in the proposed mine plan area and adjacent areas. Specific authority for this paragraph is Sections 102, 201; 507(b)(13), 508(a)(10), (14); 515(b) (23) and 522(e) of the Act and the National Historic Preservation Act.

One commenter has suggested that "paleontological" descriptions be deleted from this paragraph, because the word was not specifically referenced in the Act. This requirement has not been deleted, because one of the Act's purposes is to broadly protect all "environmental" resources.

4. Paragraph (c) would require the applicant to reveal any interest in lands adjacent to the area to be covered by the proposed mine plan area. Specific authority for this paragraph is Section 508(a)(11) of the Act.

§ 779.13 Description of hydrology and geology: general requirements.

1. Authority for this section is Sections 102; 201(c); 501(b); 503; 507(b); 508(a); and 515(b) of the Act. This Section would require that all applications contain a statement of the geology, hydrology, and water quality and quantity for all lands within and adjacent to the proposed mine plan area, in accordance with the more detailed requirements of sections 779.14-119.17 of this Part.

2. Paragraph (a) would require that information on adjacent areas be provided by the regulatory authority to the extent that it is available. Paragraph (b) would require that, to the extent this information is not available from a State or Federal agency at the time of the filing of an application, the applicant must gather and submit enough data to provide the information. The Office recognize that this will place a burden on applicants for those areas which have not been studied by government agencies, but it is the applicant who is seeking permission to mine. Congress clearly intended that no permits issue until the hydrologic consequences are known. Section 510(b)(3) of the Act. The applicant could choose to wait until a government agency can provide the data, but if he desires not to wait, it is the view of the Office that he must procure the necessary data. This burden may be lessened for some operators by Section 507(c) of the Act, which provides financial assistance for the requirements of this Section of the regulations to applicants whose production will not exceed 100,000 tons per year.

3. Paragraph (c) of Section 779.13 would require that no permit be approved until the information required by paragraphs (a) and (b) is available for incorporation into the application. Section 507(b)(11) of the Act is the principle authority for the requirements of paragraphs (a)-(c).

The information required in this Section will enable the regulatory authority to determine whether the applicant can comply with the requirements of Sections 816.13-15, 816.31-816.39, 816.41-816.57; 816.71-816.73, 816.81-816.88, and 816.91-816.93 of Subchapter K. The technical literature used to develop sections 779.13-779.17 was the same as that used for those sections of Subchapter K, plus additional materials noted below.

§ 779.14 Geology description.

1. Authority for paragraphs (a) and (b)(1) is Sections 102; 201; 507(b)(11), (14) and (15); and 508(a)(12), (13), and (14) of the Act. Authority for paragraph (b)(2) is Sections 102; 201; 507(b)(15); and 508(a)(12)-(14) of the Act. These paragraphs implement the requirements of the Act for geologic information needed for each application.

2. The information to be required under paragraphs (a) and (b)(1) of this Section will enable the regulatory authority to determine whether the applicant can comply with the performance standards of Sections 816.13-816.15, 816.31-816.39, 816.41-816.45; 816.59; 816.61-68; 816.71-73; 816.79; 816.91-816.93 and 816.99 of Subchapter K.

Paragraph (b)(2) allows a waiver of the requirements of paragraphs (a) and (b)(1), upon request of the applicant, where the regulatory authority already has at its disposal sufficient test or core boring data about the proposed mine plan area to make further data collection unnecessary.

2. Additional technical literature relied upon for development of this Section was:

(i) Laboratory Methods Recommended for Chemical Analysis of Mined-Land Spoils and Overburden in Western United States; U.S. Dept. of Agriculture, Agriculture Handbook, No. 525 (1977).

(ii) Field and Laboratory Methods Applicable to Overburdens and Minesoils; U.S. Environmental Protection Agency, (1978), (EPA-600/2-78-054).

(iii) Dollhopf, D. J., et al., 1977, Selective Placement of Coal Stripmine Overburden in Montana, USBM contract report H0262032, Mont. Agri.

Exp. Stat., Recl. Res. Prog., Mont. St. Univ., Bozemen, Montana.

(iv) Rolston and Wiram, 1978, The Need for Selective Placement of Overburden and Equipment Considerations, Amer. Min. Cong. Jour., Vol. 64, No. 1, pp. 18-24.

3. Analytical requirements for determining overburden characteristics are highly variable and may demand regional and local specialization. (Dollhopf, 1977; Ralston, 1978; USDA, 1977; USEPA, 1978). In the west, emphasis must be directed toward the identification of undersirable sodic and alkaline soil (Dollhopf, 1977, pp. 48-51 and Rolston, 1978, p. 18). In eastern and midwestern States, strata may contain high percentages of pyritic material (Ralston, 1978, p. 18). These problem materials can have a direct adverse impact on local and regional surface and groundwater quality and the establishment of a vegetative cover, if not properly handled.

§ 779.15 Groundwater hydrology and geology.

(1) Authority for this Section is Sections 102; 201(c); 501(b); 503(a); 507(b), 508(a), 510(b)(3) and 515 of the Act. This Section would require a full description of the groundwater hydrology for the proposed mine plan area and areas beyond the plan area which will probably be affected by the proposed operation. Information collected pursuant to this Section will enable the regulatory authority to determine whether the applicant can comply with Sections 816.13-816.15, 816.31-38, 816.41-816.59, 816.71-816.73; 816.79; 816.81-88; and 816.91-816.93 of Subchapter K.

(2) The occurrence and movement of groundwater in coal producing areas is a very complicated question. Groundwater resources are largely dependent on regional and local geologic conditions; multiple aquifers may exist, each having distinct water bearing characteristics. The chemical quality of the groundwater may change significantly in both unconfined and confined aquifer systems (USGS Professional Paper 427, 1970).

In areas where multiple aquifers exist, the mining operations can easily cause aquifers containing usable water to be polluted by an aquifer containing water of inferior quality, through creating inter-aquifer connections from rock fracturing. Grim & Hill, 1924. Therefore, groundwater resources must be evaluated to determine:

(a) Location and extent of aquifers;

(b) Water bearing characteristics of aquifers;

(c) Chemical quality of the water contained in each aquifer that may be affected by the mining operation;

(d) Directions of groundwater movement in aquifers;

(e) Recharge and discharge areas for groundwater systems.

(3) The occurrence and movement of groundwater is controlled by regional and local geologic conditions; therefore, geologic data coupled with hydrologic data must be carefully evaluated. The following data are believed to be necessary:

(a) Geologic mapping

(b) Maps showing location of water wells and springs;

(c) Depth to water below land surface in wells;

(d) Chemical analyses of water from wells and springs;

(e) Yield characteristics of wells;

(f) Well construction data (depth, perforated intervals, etc.); and

(g) Drillers' logs.

4. In areas where historic groundwater data are not adequate to evaluate the groundwater resources, the regulatory authority may need to require test drilling to provide adequate hydrologic data. These test holes may be necessary for determining water quality in aquifers, location of aquifers, transmissivity and other parameters as required.

Technical literature used to develop this section included that literature used to develop Sections 779.14, 816.13-816.15, 816.41-816.57, 816.71-816.73, 816.79, 816.81-816.88, and 816.91-816.93, and, in addition, the following:

1. Hem, John D., Study and Interpretation of the Chemical Characteristics of Natural Water, USGS WSP 1473, 2nd Edition, 1970, 363 p.

2. Groundwater Subgroup of Water Work Group, Northern Great Plains Resource Program, Shallow Groundwater in Selected Areas in the Fort Union Coal Region, USGS Open-file Report 74-48, 1974.

3. U.S. Geological Survey Professional Paper 427, 1970; Hydrologic Influences of Stripmining.

§ 779.16 Surface and groundwater information.

1. Authority for this Section is Sections 102; 201(c); 501(b); 503(a); 507(b)(10)-(15); 508(a)(12)-(13); 510(b)(3) and 515(b) of the Act. Information collected pursuant to this section would enable the regulatory authority to determine whether the applicant can comply with performance standard of Sections 816.13-816.15, 816.31-816.39, 816.41-816.59, 816.71-816.73, 816.79, 816.81-816.88, 816.91-816.93, and 816.133 of Subchapter K.

Under this section, the applicant would identify surface and groundwater information to establish baseline conditions and to determine specific requirements necessary to successfully minimize adverse impacts to the hydrologic balance of the mining area.

2. Parameters that would be required to be monitored under this section should be regarded as a minimum listing, based on those polluting substances for which specific effluent limits are being proposed at Sections 816.41-816.42 of Subchapter K. Minimum pre-operation sampling frequencies of specific substantees and water flow data are being proposed by expected variations in the components to be monitored. Seasonal variations as a minimum should be elucidated, and in some instances duirnal cycles of certain parameters may need to be determined. This monitoring should last for a minimum of one year, and two years or more may need to be specified by the regulatory authority in some instances, depending upon the amount of historical information. Sampling locations, techniques, preservation, and analyses are other considerations that require proper attention to obtain valid, representative information.

3. Analytical procedures and techniques to be followed in obtaining this water quality information are those contained in the following publications. American Waterworks Association, 1977, *Standard Methods for the Examination of Water and Wastewaters.* U.S. Environmental Protection Agency, *Manual of Methods for Chemical Analyses of Water and Wastes* (EPA 625/6-74-003), and the EPA National Water Quality Analysis Regulations at 40 CFR 136.

4. *Models.* Based upon a preliminary review of technical literature, the office believes that it may be useful to specify that applications be required to contain the results of mathematical modeling of ground and surface water for water quantity (flows) and for total suspended solids/sediment, total dissolved solids, iron, total manganese and acid as these parameters must be evaluated for impact of the proposed operations, prior to issuance of a permit on the hydrologic balance.

"Modeling", in this context, would mean a ". . . system of postulates, data, and inferences presented as a mathematical description" of the way in which proposed surface coal mining and reclamation operations would impact on ground and surface water. (Webster). The literature reviewed suggests that techniques are now available to model, in a sufficiently predictive manner, the quality and quantity of surface and ground waters through and around coal-mined areas. These techniques should be expected to be improved with the collection across the country of site-specific baseline data. Although the output of the available models may not be of high accuracy in all cases, the offices not aware of any other equally well-orga-

nized mechanism available for predicting cumulative hydrologic impacts over substantial lengths of time.

Technical literature reviewed included:

(a). EPA, 1976, "Proceedings of the Conference on Environmental Modeling and Simulation," EPA-600/9-76-018;

(b). R. W. Nelson, "Identification and Evaluation of Specific Techniques and Computer Models Useful in the Analysis of Subsurface Contaminant Migration—Outline of Study II for the Physical and Life Sciences Technology Section, Research Dept., Atlantic Richfield Hanford, Co.;

(c). Nelson, R. W., "Evaluating the Environmental Consequences of Ground Water Contaminations," Computer Services Corp. (Richland, Washington);

(d). Konilcow and Bredihoeft, 1974, "Modeling Flow and Chemical Quality Changes in an Irrigated Stream—Aquifer System." AGU, Water Resources Research;

(e). Gillham and Faroodelen, 1974, "Sensitivity-Analysis of Input Parameters in Numerical Modeling of Steady-State Regional Ground Water Flow," AGU, Water Resources Research;

(f). Gilhar, 1974, "Stochistic Analysis of Phrestic Aquifers," AGU, Water Resources Research;

(g). Kunkel, 1973, "Data Requirements for Modeling a Ground Water System in an Arid Region," USGS WRT 4-73;

(h). Zand, et al., 1976, "Static Transport and Modeling of Water Quality in a Small Stream," Vol. 4; No. 2, Mar.-Apr., 1976, USGS Research, p. 233-240.

(i). Gelhas, L. W. and J. L. Wilson, 1974. "Ground Water Quality Modeling," U12, No. 6, *Ground Water;*

(j). Hundoon, 1974, "Finite Difference As Applied to the Solution of Ground Water Flow Problems," Wyoming Water Resources Research Institute, Laramie, Wy.;

(k). Prickett and Lonnquist, 1971, "Selected Digital Computer Techniques for Ground Water Resource Evaluation," Illinois State Water Survey, Urbana, Ill.;

(l). USEPA and the National Water Well Association, 1976. "Proceedings of the Third National Ground Water Quality Symposium," Special Issue, Vol. 14, No. 6, Nov.-Dec., 1976;

(m). Meyer, C. F. and D. C. Kleinecke, 1968, "Development of Capabilities for Mathematical Modeling of Ground Water Flow By Use of Digital Computers; TEMPO-General Electric Co., Santa Barbara, 68TMP-96;

(n). Bachmad, et al. 1978, "Utilization of Numerical Ground Water Models For Water Resources Mangement," EPA Rpt. 60018-78-012;

(o). De Wiest, R. J. M., 1968, "Geohydrology," John Wiley & Sons, N.Y. Chapter 8;

(p). Davis, and De Wiest, 1969, "Hydrology," John Wiley & Sons, N.Y.;

(q). Poluhainous-Kuching, P., 1972, "Theory of Ground Water Movement," translated by De Wiest, Princeton Univ. Press, Princeton, N.J., Chapters VI and XVI;

(r). Karplus, W. J. 1958, "Anology Simulation-Solution of Fluid Problems," McGraw Hill, N.Y., Part 2.

The Office has not, however, yet formulated the text of specific regulations to address water modeling. It specifically solicits comments on this matter, particularly on the following questions:

1. Whether applicable models have been calibrated and/or verified for use in coal mining situations?

2. What are the costs of using those models in field situations?

3. What levels of accuracy may be expected to be obtained with available models?

Following a final review of the literature and any comments received, the office may propose, as part of the final regulations, specific provisions regarding models.

§ 779.17 Alternative water supply information.

Authority for this Section is Sections 102; 201; 507(b)(11); 508(a)(13); 510(b)(3) and 717(b) of the Act. As proposed, this Section would require identification of water sources that could be used to replace water supply rights which would be damaged by the proposed mining operation, as is required under proposed Section 816.54 of the performance standards.

§ 779.18 Climatological data.

Authority for this Section is Sections 102; 201; 501(b); 503(a); 507(b)(12); and 508(a)(5) of the Act. Here climatological data concerning temperature, precipitation, and air quality would be required, if requested by the regulatory authority. These data may be needed by the regulatory authority, in evaluating whether the applicant will be able to comply with the performance standards of Sections 816.21-.24; 816.31-.38; 816.41-.50; 816.56; 816.65; 816.71-816.73; 816.81-816.88; 816.91-816.97; 816.100-816.117, and 816.133 of Subchapter K.

§ 779.19 Vegetation data.

(1) Authority for this Section is Sections 102; 201; 501(b); 503; 504; 508(a)(2)(B-C); 508(a)(3), (4), (5); 510(b)(2); 515(b)(2); and 515(b)(19) of the Act. This Section would require submission of the location of the proposed vegetation reference area; and, if required by the regulatory authority, a vegetation map of the proposed mine plan area, the proposed reference area, and certain adjacent areas.

A vegetation map and description may be required in the permit application by the regulatory authority for the following reasons:

(i) To assist in evaluation of the natural vegetative capability of the site and to determine if the operations will be conducted in accordance with Sections 816.45-816.46, 816.97, 816.111-816.117, and 816.133 of Subchapter K.

(ii) To quantitatively characterize the vegetation in the reference area and permit area for establishing comparability of the permit area.

(iii) To identify those species of vegetation that may contribute to important post-mining land use values of the permit area, by serving as seed sources for revegetating the land or as important habitat types for fish and wildlife.

(iv) To help in evaluating the present and potential productivity of the site, which must be described in the application under Sections 508(a)(2)-(4) and 515(b)(2) of the Act.

(v) To establish premining site conditions for wildlife and fish habitats.

(2) Technical literature used in the formulation of this Section was:

1. Curtis, J. T., (1959), "The Vegetation of Wisconsin, An Ordination of Plant Communities," Univ. of Wisconsin Press, Madison, 657 p.

2. Goff, F. G., (1967), "Methods Used in Field Investigations of Vegetation and Soils in Milfred, C. J. et al, Soil Resources and Forest Ecology of Menoninee County, Wisconsin," Bulletin 55, Univ. of Wisconsin Geological and Natural History Survey, p. 187-189.

3. Daubenmire, R. F., (1968), "Plant Communities, A Textbook of Plant Synecology," Harper and Row, New York, 300 p.

4. Kuchler, A. W., (1964), "Potential Natural Vegetation of the Coterminous Untied States" (Map and Manual), N. York, Am. Geographic Society, 116 p.

5. ....., (1967), "Vegetation Mapping," New York, Ronald Press Co., 472 p.

6. Braun, E. L., (1950), "Deciduous Forests of Eastern North America," Philadelphia, Blakiston Co.

7. Radford, A. E., (1977), "Natural Area and Diversity Classification System, A Standardized Scheme for Basic Inventory of Species Community and Habitat Diversity," Univ. of N. Carolina Student Stores, Chapel Hill, 70 p.

8. Wharton, C. H., (1978), "Natural Environment of Georgia," Atlanta, Georgia, Dept. of Natural Resources, 227 p.

9. Carter, V. A., et al., (1977), "Wetland Classification and Mapping in Western Tennessee," Proceedings of 2nd Annual William T. Pecora Memo-

rial Symposium, Oct. 25-29, 1976, Sioux Falls, pp. 213-234.

10. Carter, V., and Burbank, J. H., (1978), "Wetland Classification System for the Tennessee Valley Region," TVA Tech. Note, B-24 FFWD, Morris, TN. (In press).

11. Soc. of American Foresters (1940), "Forest Cover Types of Eastern United States," Washington, DC, Report of Committee on Forest Types, p. 39.

12. Costin, H. J., (1958), "Study of Plant Communities," W. H. Freeman & Co., San Francisco.

13. Davis, J. A., (1977), New York Fish and Game Journal Soc., 24 No. 2, An Ecosystem Classification of New York State For Natural Resource Management, p. 129-143.

14. Giles, R. H., (1969), "Wildlife Management Techniques," Wildlife Society, Washington, D.C., Chap. 12-13, p. 119-232.

15. Benton, A. H. and Werner, W. E., (1965), Manual of Field Biology and Ecology, 4th Edition, Minneapolis, Burgess Pub. Co.

16. Pfister, R. D., et al., (1977), "Forest Habitat Types of Montana," USDA - Forest Service, General Technical Report No. INT-34, 174 p.

17. Daubenmire, R. A., (1973), "Comparison of Approaches to the Mapping of Forest Land for Intensive Management," Forestry Chronical 49:87-91.

18. Daubenmire, R. and Daubenmire, J. B., (1968), "Forest Vegetation of Eastern Washington and Northern Idaho," Washington Agricultural Experiment Station Technical Bulletin 60, 104 p.

19. Deitschman, G. H., (1973), "Mapping of Habitat Types Throughout a National Forest," USDA Forest Service General Technical Report INT-11, 14 p., 1973.

20. Cowardin, L., et al., (1977), "Classification of Wetland and Deep Water Habitats of the United States" (An Operational Draft), Fish and Wildlife Service, Dept. of Interior.

21. Wielgolaski, F. A., (1972), "Vegetation Types and Plant Biomass in Tundra," Arct. Alp. Reg. 4:289-306.

22. Arkley, R. J., (1972), "Factor Analysis of Ecosystem Components for the Barrow Intensive Site," 1970, p. 121-127, in S. Bowen (ed) Proc., 1972, U.S. Tundra Biome Symposium, U.S. Tundra Biome, 211 p.

23. Billings, W. D. and H. A. Nooney, (1968), "Ecology of Arctic and Alpine Plants," Biol. Rev. 43:481-530, 1968.

24. Frances, C. J., (1978), *American Birds*, Vol. 32, No. 1, "Understanding Quantitative Surveys of Vegetation."

25. Zedler, P. H., and F. G. Goff, (1973), "Size-Association Analysis of Forest Successional Trend in Wisconsin," Ecol. Monogr. 43:(1);77-94.

26. Anclair, A. N., and Cottam, H., (1971), "Dynamics of Black Cherry (*Pinnas serotina* Erhr.) in Southern Wisconsin Oak Forest," Ecol. Monogr. 41(2):153-177.

(3) Vegetation maps, if required, should be of a scale of 1:24,000 or larger. Mapping units should be chosen using recent aerial photographs, to delineate homogeneous vegetative areas, but units selected should be field checked for accuracy, before transfer to the map. Submitted with application.

(4) Quantitative vegetation sampling, on the ground, is useful in establishing species frequency, density and productivity for vegetation map units. Quantitative sampling techniques differ from rangeland to forest to tundra. The following references from the foregoing list are believed to be most useful in describing quantitative techniques: Numbers 1-4; 6-8; 10-13; 15, 16, 18, 20-26.

§ 779.20 Fish and wildlife resources.

(1) Authority for this Section is Sections 102; 201; 501(b); 503; 506; 507(b)(11); 508(a); 510(b); and 515(b) of the Act. Paragraph (a) of this section would require the results of animal population studies to be submitted in the application. Paragraph (b) would require that the populations shall be studied in the degree of detail specified by the regulatory authority, according to two general types of sources for that information: The first source would be data which may already exist for the immediate or general area of the proposed operations as published in professional journals or other readily available scientific publications. The second source would be from field collection, under guidelines from the regulatory authority, after consultation with State or Federal fish and wildlife agency staffs. This would include original field studies, to the degree necessary to fill gaps in the scientific knowledge obtainable from the literature.

The information to be required by this Section will enable the regulatory authority to determine whether the applicant will be able to comply with Section 816.97 of the performance standards. Guidance for baseline data collection under this Section may be found in "A Systems Approach to Baseline Studies,"; James B. State, *et al.* U.S. Fish and Wildlife Service, Western Energy and Land Use Team, Fort Collins, Colorado, Publication O.B.S. 78-21 (1978).

(2) *Alternatives:* In drafting this Section and section 780.15 of this paragraph the following alternative methods for permit information regarding fish & wildlife were considered:

(i) *Group "A":*

(1) In all cases, require a detailed survey of every fish and wildlife species present in the mine plan area and adjacent area, including population densities for each species and plans for protection;

(2) Require specific species inventory, habitat discussion and protection plans for species selected by a regulatory authority, after consultation with local fish and wildlife agencies:

(3) Require no detailed data in permit applications, except for an inventory and a plan for protecting any endangered or species existing in the area and any additional information as required by the Endangered Species Act;

(ii) *Group B:*

(4) For all mines require a detailed inventory and a protection plan for all species; and

(5) Only for mines producing more than 100,000 tons annually, require a detailed inventory and a protection plan for all species.

Fish and wildlife habitat can be temporarily damaged or completely destroyed by certain mining practices. In particular, construction of haul roads, sedimentation ponds and coal processing waste banks, as well as the primary stripping activity itself, can disturb nesting and breeding habitat, destroy food forage and disrupt the biological chain. (See technical literature cited for section 816.97). Consequently, the proposed regulations have been drafted to require that fish and wildlife habitat, in general, be protected and that features disrupted by mining activities, such as mining through a stream bed, be returned to its approximate original condition following mining.

"GROUP A"

Alternative 1 of Group "A" would require an indepth survey of all fish and wildlife within the mine plan area and adjacent area. Such a survey would include identification of each and every species, data on each population, discussion of habitat requirements, and a proposed program for achieving complete or better recovery of the existing habitat and species population following mining. Such a survey would have to be conducted by a qualified fish and wildlife research team for each species. Alternative 2 of Group "A" would permit the collection of necessary data with less elaborate field analysis and interpretation. Alternative 3 of Group "A" would be to permit applicants to establish little or no fish and wildlife data base, except in those situations in which endangered species would be involved. The Office has tentatively decided to select alternative two, requiring in-depth field surveys, if no previous literature on fish and wildlife in the vicinity of the operation is available. The first alternative was rejected because of the office's understanding that there exists for many species and

areas, published data that can be used, in lieu of a full field survey to develop information for permit applications. The third alternative was rejected because the Act requires protection broadly of fish and wildlife, not just endangered species.

"GROUP B"

Alternatives 4 and 5 involve consideration of what requirements should be established for small operators. The first assumption is that small operators would not be exempt from these application requirements. Detailed fish & wildlife inventory data would be used to define potential stresses on the ecological chain. A protection plan would be required under section 780.15, so that reclamation efforts would be established to provide maximum use of the land and establishment of adequate vegetative cover conducive to supportive habitat. Through proper backfilling and grading of affected areas and stream channels, deteriorated habitat could be regenerated to support fish and wildlife

Alternative 5 was considered as another choice in that detailed inventories and protection plan under Pact 780 would be required for only mines of production of over 100,000 tons per year. This alternative was not selected, because it is believed that even small mines can significantly and adversely affect fish & wildlife.

The Office however, has not yet decided which of alternatives 4 or 5 to hereby select and specifically solicits comments on both.

§ 779.21 Analyses of selected overburden topsoil mixtures.

Authority for this Section is Sections 102; 201(c); 501(b); 503(a); 507(b); 508(a); 510(b); and 515(b) of the Act. This Section would require that applications contain the results of analyses, trials and tests required by the regulatory authority, where the applicant is proposing to use selected overburden materials instead of, or as a supplement to, topsoil in the proposed reclamation process. This information would be necessary to enable the regulatory authority to determine whether the applicant can comply with Section 816.22 of Subchapter K.

§ 779.22 Land use description.

(1) Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 507(b)(14); 508(a)(2), (3), (4), (5), (8), (10), (13), (14); 510(b); and 515(b)(2) and (10) of the Act. This Section would require applicants to describe the pre-mining land-use conditions of the lands within the proposed mine plan and adjacent areas. Paragraph (a) states the general requirement. Paragraph (b) would require description of the existing land uses and of historical land uses, if the pre-mining use is changed within 5 years prior to the beginning of the proposed mining operation. Paragraph (c) would require a description of the capability of the land, prior to mining, to support a variety of uses, a description of the pre-mining productivity of the land, and details of whether the land has been previously mined. The information required under this Section would enable the regulatory authority to determine whether the applicant would be able to comply with Section 816.133 of Subchapter K.

(2) Technical literature used in developing this Section was:

1. Toth, R. Criteria in Land Planning and Design. Landscape Architecture 62(1), 1971.

2. Moore, G. T., Emerging Methods in Environmental Design and Planning. M.I.T. Press, Cambridge, Mass. 1968.

3. Johnson, A. H., Berger, J., and McHarg, I. L., Landscape Analysis for Ecologically Sound Land Use Planning. Department of Landscape Architecture and Regional Planning. University of Penna., Phila. Pa. 1978.

4. Thurow, C., Toner, W. and Erley, D., Performance Controls for Sensitive Lands. American Society of Planning Officials Planning Advisory Service. Report Nos. 307, 308. Am. Soc. of Planning Officials, Chicago, Ill. 1975.

5. McHarg, I. L., Design with Nature, Natural History Press. Garden City, New York, 1969.

(3) The information to be required by this section would result in a report of a synthesis of the premining conditions as part of the comprehensive reclamation planning process, including the economic, engineering and legal factors which must be melded into a complete reclamation plan.

The landscape can be thought of as being composed of elements or components—(e.g., soils, geology, vegetation, hydrology, fish and wildlife, physiography (topography) and land use.) Each landscape element may provide opportunities or constraints for certain land uses. Areas which are most suitable for specific uses will have the greatest number of opportunities provided by the landscape and the least number of, or least severe, constraints imposed by the landscape for that particular use. (References 2, 3, 4)

By using an approach of combined analysis of opportunities and constraints, the environmental impacts of the planned uses can be minimized, and the best fit between the land use and the conditions of each specific reclamation site achieved. For example, areas where there is frequent flooding for extended periods provide an obvious constraint to subdivision housing. This property of the landscape lowers the inherent suitability of such areas for that use. This could be ameliorated, by using floodproofing and special construction techniques in engineering foundation structures. However, costs, both economic or ecological, will be incurred for construction and maintenance. This same area may provide little constraint for a golf course, park or agricultural use. The most cost-effective and least environmentally damaging land uses can be identified and developed to a large degree, by the landscape's characteristic properties and capabilities. (Reference 5)

§ 779.23 Maps, plans and cross-sections: preparation.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 507(b) (10), (13), (14), (15); 508(a)(5); and 510(b) of the act. Paragraph (a) of this section would require that maps, plans and cross-sections, to be supplied in the application. Through section 779.25, be prepared by, or under the direction of, certain qualified professionals, so that the quality of these documents can be assured. Paragraph (b) of section 779.23 would require that maps be at an appropriate scale and contain all of the information typical of USGS topographical maps, so that complete information about the area can be obtained by the regulatory authority.

Through years of map making and usage, the USGS 7½ minute maps have developed as the standard for mapping topography and geology. They show enough detail, in general, to provide a baseline for reestablishing the premining topography. High quality map information is necessary to help the regulatory authority evaluate the applicants' ability to comply with essentially all of the performance standards in Part 816.

§ 779.24 Maps: general requirements.

This Section has 13 paragraphs, all of which implement particular requirements of the Act. Specific authority of the Act for each paragraph includes, but is not limited to:

(a) Section 507(a)(1). (Ownership of the surface and subsurface estates would have to be established.)

(b) Section 507(b)(9). (A map showing the areas that the operator can legally mine is needed to determine the maximum extent of the proposed mining operations.)

(c) Sections 507(b)(8); 508(a)(1). (The total impact of the operation on the environment cannot be assessed without knowing the total area to be mined, when and where it is to be done, and any additional areas expected to be mined.)

(d) Sections 507(b)(13) and 522(e)(5). (Identification of structures and their use is need to determine the impact of

mining on other functions in the community.)

(e) Sections 507(b)(13); 508(a)(2); 515(b)(2). (Disruption or potential disruption by the operations of various pipelines, railroads, utilities, irrigation works, wells, etc. must be established, to prevent problems to the surrounding public community and establish any need for relocation or rebuilding of these facilities.)

(f) Sections 507(b)(13); 508(a)(2)(C); 515(b)(9). (Areas selected as the standard for reference when revegation is being evaluated must be located so that a determination of their suitability and representativeness may be established).

(g) Sections 507(b)(11) and (13); 508(a)(13); 515(b)(10). (Surface water flow and users in the affected area need to be established to determine the interruptions that will be caused by mining and the corrections that will be need both during and after mining).

(h) Sections 507(b)(13); 522(e)(4). (Locations of highways and roads on or near the mine need to be established, to prevent disruption of traffic flows, hazards to travelers, and provide for the proper restoration of traffic flow and access after mining).

(i) Sections 507(b)(13); 508(a)(10), (14); 522(e)(3). (The area affected may include sites of recreation, scientific or social significance that must be evaluated to determine whether they should be saved, how the mining should proceed around the site, precautions needed at the site, and reclamation procedures needed to maintain the values associated with the site).

(j) Sections 507(b)(13); 508(a)(10), (14); 515(b)(23); 522(e)(5). (Cemeteries must be identified to plan their relocation or avoidance and prevent exposing mine workers to health hazards).

(k) Section 522(e). (Areas that are established or are being considered for inclusion in National Wild and Scenic River Systems or National Trails System must be located to avoid damage to these irreplaceable national resources).

(l) Sections 507(b)(13) and (14); 508(a)(14). (The location and depth of water, gas and oils is needed to establish premining data on their condition and to be sure they are avoided or properly accounted for during mining).

(m)—Section 508(a)(14).

§ 779.25 Cross-section maps and plans.

Authority for this Section is Sections 102, 201, 501(b), 503, 504, 507(b)(11); 508(a) and 515(b) of the Act. Information which would be required under this section would provide the regulatory authority with complete information about the proposed mining site, so that the applicants ability to comply with the performance standards of Part 816 could be properly evaluated.

(1) Under paragraph (a), the coal seams to be extracted, their nature, depth and thickness would be determined, to establish the amount of material to be removed, the hydrologic effects of removing the seam, and the nature of the final pit floor. From this data the reclamation requirements will be established.

(2) Under paragraph (b), crop lines would be described, to establish the limits of the proposed mining operations. The strike and dip of the seams are useful in estimating the probable extent of the surface operations and the mining method to be used.

(3) The Act does not allow surface mining to take place closer than 500 feet for underground workings without special approval. Under paragraph (c) maps locating the underground workings would provide a basis for assessing the potential physical and environmental hazards of mining in their vicinity. The safe distance for mining near these hazards could then be established.

(4) Under paragraph (d), the premining subsurface hydrologic regime would be established, to determine the changes that mining would cause to the hydrologic balance, to help plan corrections for negative impacts, and set standards for post mining groundwater flows.

(5) Surface water systems, both natural and man-made, would be located under paragraph (e), to help establish water table data, recharge relationships, interruptions to both natural and artificial water courses, possible relocation routes, and post-mining flow paths.

(6) The discharge of industrial waste on or near the mine needs to be established, to determine the effect on groundwater and surface water during and after mining. Under paragraph (f), that information would provide baseline data for original non-mine pollution levels, and allow for the design of systems to control industrial waste flows.

(7) Under paragraphs (g) and (h), previous surface mining activities would be shown, to establish what areas where disturbed by operations other than the proposed one, to locate areas to be handled under abandoned mined lands funds, to assess the present environmental damage of the old workings, and to properly establish reclamation criteria based on the natural condition of the land, not the present disturbed condition.

(8) Environmental control facilities would be identified under paragraph (h) to anticipate, minimize, or avoid the interruption of their operation.

(9) The requirement of paragraph (i) is found generally in section 515(b)(14) of the Act. Under this paragraph, slope measurements could be made from topographic maps. However this paragraph would allow for the use only of maps with 10 feet minimum contour intervals, where slopes are over 20 degrees, and only maps of 5 feet maximum intervals, where slopes are less than 20 degrees. This requirement is based on a need for more detail of slope data than is found on standard 7.5 minute U.S.G.S. maps. U.S.G.S. maps commonly use 20 degree intervals in steep slope areas and 10 degree intervals in less steep areas. This reduces knowledge of vertical variation over substantial horizontal distances, thereby reducing knowledge of the "approximate original contour" which Congress mandated to be reconstructed in most cases. The Office does not believe that the use of more detailed maps for slope measurements will create substantial burden for the industry. Indeed, the use of shorter contour intervals on mining plan maps is already widespread in the industry. (See Memorandum to OSM Administrative Record on "Mine Plans Submitted to E.P.A., Region 8, Denver, Colorado").

(10) In addition to being required by the Act, the paragraphs of Section 779.25 would require information which will enable the regulatory authority to evaluate the applicants' ability to comply with the following Sections of Part 816 of Subchapter K.

(a) 816.61-.68; 816.121-.126; 816.99
(b) 816.50-.55
(c) 816.61-.68; 816.50-.55; 816.121-.126
(d) 816.50-.55; 816.61-.68
(e) 816.41-.59; 816.33-.34
(f) 816.41, .42, .52, .55
(g) 816.21-.25; 816.32; 816.41-.57; 816.111-.117
(h) 816.21-.25; 816.32; 816.41-.57; 816.71-.73; 816.81-.93; 816.111-.116
(i) 816.102.

§ 779.26 Soil resources description.

Authority for this Section is Sections 102; 201; 501(b); 503, 504 and 507(b)(11); 508(a); and 515(b) of the Act. This Section would require the submission of a description of the soil resources of the mine plan area, through a soil survey, to enable the regulatory authority to make determinations under sections 515(b)(2), (4), (5), and (6) of the Act. These determinations would be related to enforcement of the performance standards of Section 816.22(b), (c), and (e), 816.111-816.116 and 816.133 of Subchapter K.

PART 780—SURFACE MINING PERMIT APPLICATION—MINIMUM REQUIREMENTS FOR RECLAMATION AND OPERATION PLAN

Introduction

Part 780 is proposed to establish the heart of the permit application; the mining operations and reclamation plan. The regulatory authority will utilize this information, together with the description of the existing environmental resources obtained under Part 779 to predict whether the lands to be mined can be reclaimed and if the operations can be conducted in compliance with the environmental protection performance standards of Part 816, Subchapter K.

§ 780.11 Operation plan: General requirements.

Authority for this Section is Sections 102; 501(b); 503; 507(b); 508(a); 510(b); and 515(b) of the Act. This Section would require that each application contain a description of the proposed mining operations, including a narrative of mining methods and procedures proposed to be used in the operation of the mine. Paragraph (2) of this Section would require the narrative to explain the construction, modification, use and maintenance and removal of certain mine operation facilities.

The requirements of this Section are designed to aid the regulatory authority in determining whether the applicant can meet the following performance standards of Subchapter K:

Sec. 780.11(a)(1)	Sec. 816.62
Sec. 780.11(a)(2)(ii)	Sec. 816.39
Sec. 780.11(a)(iii)	Secs. 816.46, 816.48 and 816.91
Sec. 780.11(a)(iv)	Secs. 816.21-816.24, 816.71-816.73, 816.100-816.106
Sec. 780.11(a)(2)(v)	Secs. 816.32-816.36 and 816.59
Sec. 780.11(a)(2)(vi)	Secs. 816.81-816.88 and 816.91-816.93
Sec. 780.11(a)(2)(vii)	Sec. 816.39
Sec. 780.11(a)(2)(viii)	Secs. 816.41-816.46, 816.50 and 816.56

§ 780.12 Operations plan: Blasting.

Authority for this Section is Sections 507(g) and 508(a)(13) of the Act. This Section requires that each application for a surface mining permit provide a narrative description of the blasting operations to be used in the proposed mining operations. Specific information about the types and amounts of explosives, their handling and use are required in paragraphs (a)-(g). This is necessary for the proper evaluation by the regulatory authority of the possible environmental and public safety consequences of the use of explosives during the proposed mining operation and are needed to determine whether the applicant can meet the performance standards found in Sections 816.41, 816.60 and 816.61-816.68 of subchapter K.

§ 780.13 Operations plan: Maps and plans.

Authority for this Section is Sections 102; 201(b); 501(b); 503; 504; 507(b); 507(g); 508(a); 517; and 522(e)(4) of the Act. In addition to the narrative plans to be required by the preceding Sections, this Section of Part 780 would require each application to include maps and plans relevant to the proposed operation. Some of these maps and plans would have to be prepared by specified professionals as required under Sections 507 and 508 of the Act. Accurate maps and plans are needed by the regulatory authority to properly determine whether the planned operation should be approved, modified, or disapproved.

The requirements of this Section are designed to aid the regulatory authority in determining whether the applicant can meet numerous performance standards. The Subsection of 780.13 and the performance standards are designed to provide information as follows:

Sec. 780.13(a)	Secs. 816.21-816.24, 816.31-816.32, 816.36; 816.38-816.39; 816.41; 816.43-46; 816.49; 816.56; 816.59; 816.71-816.73; 816.79; 816.81; 816.83; 816.87-816.77; 816.91; 816.101; 816.121-816.124; and 816.133.
Sec. 780.13(b)	Sec. 816.124.
Sec. 780.13(c)(1)	Sec. 816.39.
Sec. 780.13(c)(2)	Secs. 816.21-816.24; 816.21-816.24; 816.31-816.32; 816.43-816.46; 816.56; 816.71-816.73; 816.81; 816.83; 816.91-816.93; and 816.99-816.101.
Sec. 780.13(c)(13)	Secs. 816.36; 816.39; 816.81; 816.91; and, 816.95.
Sec. 780.13(c)(4)	Secs. 816.21-816.24; 816.71-816.73; 816.81-816.88; and 816.101-816.105.
Sec. 780.13(c)(5)	Secs. 816.43-816.50; 816.55; 816.83; and, 816.91.
Sec. 780.13(c)(6)	Sec. 816.95.
Sec. 780.13(c)(7)	Secs. 816.39; 816.81; 816.83; 816.86; and 816.91.
Sec. 780.13(c)(8)	Sec. 816.97.
Sec. 780.13(c)(9)	Secs. 816.61; 816.68.
Sec. 780.13(c)(10)	Secs. 816.46; 816.49; 816.91-816.93.
Sec. 780.12(c)(11)	Secs. 816.56; 816.73-816.76; 816.81; 816.91; 816.100-816.106; and 816.133.
Sec. 780.13(c)(12)	Secs. 816.41-816.42; 816.52; 816.95; and 816.97.
Sec. 780.13(c)(13)	Sec. 816.133.

§ 780.14 Air pollution control plan.

Section 780.14 of the proposed regulations would establish the permit application requirements, so that the regulatory authority is provided with comprehensive and reliable information on the air quality impact of the proposed surface coal mining operation. This Section is intended to assure that proposed surface coal mining operations meet all national ambient air quality standards and any other applicable Federal or State air quality standards.

In general, the proposed regulations are structured on both a regional and a projected production level basis. This is proposed, in part, because of the current status of technical literature and air quality regulations in the field. The regulations also recognize the potential variations in air quality impact depending upon climate, geology and operating characteristics of surface coal mining operations in different parts of the country.

Legal authority: Permit application regulations for air quality are supported by Sections 102, 201(c), 501(b), 503(a) and (b), 507(b), 508(a)(9), 515(b)(4), and 515(b)(24) of the Act. Specifically, Congress in Section 515(b)(4) of the Act provides that all operators shall:

(S)tabilize and protect *all surface areas including spoil piles affected by the surface coal mining and reclamation operation* to effectively control erosion and attendant air and water pollution. (Emphasis added)

Thus, if a surface area is affected by surface coal mining and reclamation operations, the operator must effectively control attendant air pollution. The phrase "surface coal mining and reclamation" operation is broadly defined in the Act to mean surface mining operations and all operations necessary and incident to reclamation. Section 701(28), 30 U.S.C. Section 1291. The office believes that haul roads and access roads must be controlled because the definition of the phrase "surface coal mining." includes not only activities conducted on the surface of lands in connection with the surface mine, but also haul roads and access roads.

To implement this performance standard Congress has required that each permit application contain the steps to be taken to comply with applicable air quality laws and regulations. Section 508(a)(9), 30 U.S.C. 1258. The surface mining permit cannot be approved unless the regulatory authority finds in writing that the permit application meets requirements of the Act including the requirement to effectively control air pollution from all surface areas. Sections 515(b)(1)-(2), 30 U.S.C. Sections 1260(b)(1)-(2).

The permit application requirements listed in Subsections 780.14(a), (b) and (c) are the first critical steps in the process of assuring that all surface coal mining operations effectively control air pollution from all surface areas.

Technical literature: The following technical literature, State laws and regulations and other materials support the Sections of the regulations.

Literature Support

1. Axetell, *Survey of Fugitive Dust from Coal Mines,* EPA-908/1-78-003 PEDCO Environmental, Inc., February, 1978.

2. Cook, *Fugitive Dust from Western Surface Coal Mines,* Mathtech, Inc., Oct., 1976.

3. *Evaluation of Fugitive Dust Emissions from Mining,* EPA-68-02-1321 PEDCO Environmental, Inc., June, 1976.

4. Bass, *Impact of Significant Deterioration Proposals upon Western Surface Coal Mining Operations,* PB-253, 254, FEA May, 1976.

5. *Air Quality Effects Analysis of Falkirk Mine,* North Dakota State Department of Health, June, 1977.

6. Mann, *Compilation of Air Pollidant Emission Factors,* Second Edition, 11.2 Fugitive Dust Sources, December, 1975.

7. Craig, *Guide for Wind Erosion Control on Cropland in the Great Plains States,* U.S. Depart. of Agriculture, July, 1964.

8. *A Review of State Regulations for Controlling Fugitive Dust Emissions,* PEDCO Environmental Specialists, August, 1976.

9. *Applicant Information for Air Pollution Emission Permits Coal Mine Operations,* Colorado Department of Health.

10. *Identification of a Feasible Regulation for Controlling Localized Fugitive Dust Emissions,* PEDCO Environmental, Inc., AP42 (undated).

11. *Environmental Assessment of Surface Mining Methods: Head of Hollow Fills and Mountaintop Removal,* Skelly and Loy Interim Report, March, 1977.

12. EPA memorandum on Fugitive Dust from Surface Mines, dated May 15, 1978 (Note: Table of Typical Fugitive Dust Control Measures Observed at Western Coal Mines.)

13. Kimball, *Particulate Emissions Control—Mining and Processing,* EPA draft memorandum, undated.

14. Draft Environmental Statement, Southwestern Wyoming Coal, Vol. 1 and 2, Department of the Interior, April, 1978.

15. Nehring, *Coal Development and Government Regulation in the Northern Great Plains: A Preliminary Report,* R-1981-NSF/RC, August 1976.

21. *Where We Agree,* Report of the National Coal Policy Project, Center for Strategic and International Studies, Georgetown University (1978).

22. The Clean Air Act, as amended (42 U.S.C. 1857 *et seq*).

23. 40 C.F.R. Sec. 50.8.

24. 40 C.F.R. Sec. 51, Appendix B.

25. 40 C.F.R. Sec. 60.250.

26. Dvorak, *The Environmental Effects of Using Coal for Generating Electricity,* (Draft) Argonne National Laboratory, Argonne, Illinois, March 1977.

27. Pomerance, Statement on behalf of Friends of the Earth Public Meeting on Preliminary Proposed Draft Regulations, Washington, D.C., August 3, 1978.

28. Lippmann, Handbook of Physiology Section 9: Reactions to Environmental Agents, Ks, American Physiological Society 1977.

29. Quality Assurance Requirements for Prevention of Significant Deterioration, Air Monitoring EPA (1978).

30. Task Group on Lung Dynamics Committee, Health Physics (1966).

31. Assemblage of Data on Air Quality in Central and Southern Utah and Assessing the Impact of Coal Development in this Region on the Air Quality, Aerovironment, Inc.

32. Air Quality Criteria for Particulate Matter, HEW (1969).

33. Morrow, Airborne Contaminants Environmental Sciences on Interdisciplinary Monograph (1973).

Regional Separation: The proposed regulations separate surface coal mining operations into two regions. For operations west of the 100th meridian west longitude, the regulations have been refined to distinguish between operations with projected production levels exceeding 1 million tons of coal per year and those operations with lesser production levels. The regulations recognize, however, that surface coal mining activities may have production levels less than 1 million tons per year, but the overall air quality impact may be more significant than the impact from a single large mine when mining operations are aggregated with other major emitting facilities in the air quality control region or adjacent regions. In this instance, the regulatory authority is given the discretion to require the same air quality review as that required for single mining operations exceeding 1 million tons of coal per year. In any event a monitoring program and fugitive dust plan would be required.

For operations east of the 100th meridian west longitude, the regulations give the State regulatory authority the discretion to call for an air quality review and monitoring program if the proposed surface coal mining operations, in conjunction with other existing or proposed major emitting facilities would cause or contribute to levels of air pollution in excess of of any national ambient air quality standards or other applicable Federal or State air quality standards.

Structure of regulations. Each subsection of the permit application regulations addressing air quality would be broken down into three separate components. The components include:

(a) an air quality review which normally would include air pollution diffusion modelling;

(b) an ambient air quality monitoring program to accurately ascertain the air quality on a continuing basis in the vicinity of the surface coal mining operation; and

(c) a plan and commitment to employ fugitive dust control practices.

Within the constraint of having to meet national ambient air quality standards and any other applicable Federal or State air quality standards, surface coal mining operators are given the flexibility to select from a wide variety of effective control techniques which are, in part, listed in Sections 816.95(b) and (c) of the performance standards.

Existing operations with production levels in excess of 1 million tons per year include Utah International Navajo mine; Decker Mine No. 1; Peabody Black Mesa; Amax Belle Agriculture; Western Energy Coalstrip; Arch Minerals Seminoe No. 1; Pacific Power and Light Dave Johnson; Arch Minerals Seminoe No.2; Peabody Kayenta; Kemmerrer Sorensen; Peabody Big Sky; and Knife River Beulah. The Office proposes mandatory air quality review to assure that such operations do not result in air pollution in excess of national ambient air quality standards for total suspended particulate matter and other applicable Federal and State air quality standards.

Western surface coal mining operations can create air quality problems principally from increased fugitive dust levels. (Literature Support items 1, 2, 3, 4, 5, 6, 10, 15, 26). In particular, in March of 1978, EPA released a report prepared by PEDCO Environmental, Inc., entitled "Survey of Fugitive Dust from Coal Mines" ("PEDCO Report"). This study shows that western coal mines are "major emitting facilities" (Section 169 of the Clean Air Act defines "major emitting facility" to include 29 industrial sources and any other source with the potential to emit two hundred fifty tons per year of any air pollutant.)

PEDCO evaluated five western surface coal mines for the purpose of determining emission factors for 12 mining operations. Upwind and downwind ambient sampling was performed to develop emission factors for each mining operation. PEDCO said the general ranking of sources in decreasing order is Haul roads; Open storage piles; Dragline; Exposed areas; Fly-ash dump; Front end loader; Topsoil removal; Blasting; Truck dump; Drilling; Shovel/Truck loading; Train loading.

Haul roads were found to be the largest source and generally responsible for twice as much emission as the

next source. At a production rate of 1 million tons of coal per year, PEDCO estimated 1750 ton/yr. of particulate matter would be emitted from a surface coal mine. (PEDCO Report at 69.)

PEDCO also performed size distribution analyses of the measured particulate matter to allow for assessments of health effects. Particulate less than 10 microns in size is generally considered to be respirable and thus more dangerous to public health. Air Quality Criteria for Particulate Matter, U.S. Department of Health, Education and Welfare, Washington, D.C., Publication Number A-49. January 1969, Lippmann (1977); Task Group on Lung Dynamics Committee (1966); Morrow, (1973). Fifteen percent of the particulate matter was less than 10 microns in size. (PEDCO Report at 56.) Thus, even a small western surface mine emits 265 ton/yr. of respirable particulate matter.

It appears that when surface coal mines are aggregated in a region, the air quality impact could be more pronounced. For instance, the Department of the Interior Draft Environmental Statement for development of coal in southwestern Wyoming analyzes 4 proposed surface coal mines for that region. North Block (1.4 million tons/yr.), Twin Creek (2.5 million tons/yr.), South Haystack (3.0 million tons/yr.) and Black Butte (6.3 million tons/yr.) would, according to PEDCO, combine to increase particulate matter emissions by 7450 tons/yr. Total respirable particulate matter would exceed 1000 tons/yr. The existing and private production plus the proposed four surface mines are projected to produce approximately 30 million tons of coal per year by 1985. This corresponds to an increase of 18,000 tons of particulate matter per year of which approximately 2,700 tons would be respirable.

The PEDCO study included locating high volume samplers approximately 10, 20, 30, and 40 m. downwind of the source. PEDCO also attempted to develop a "fallout function" to assess the deposition rate of the emissions with distance from the sources. However, emission rates did not consistently decrease with distance from the source. Therefore, a published fallout factor was used in developing the emission factors. PEDCO views the emission factors to be valid for air quality impact assessments within 5 km. from the source. According to the consultant, where important air quality impacts occur at greater than a 5 km. distance from the mining operation other emission factors must be adapted. PEDCO did not perform any remote ambient air quality sampling simultaneously. However, other studies have explicitly analyzed the remote ambient air quality impact of western surface mines and concluded that national primary and secondary ambient air quality can be exceeded. Bass, Impact of Significant Deterioration Proposals upon Western Surface Coal Mining Operations, PB-253, 254 FEA May (1976).

For example the proposed surface coal mines for southwestern Wyoming, (North Block (1.4 million tons per year), Twin Creek (2.5 million tons per year), South Haystack (3 million tons per year), Long Canyon (2 million tons per year), and Black Butte (6.3 million ton per year) are projected to exceed the 24 hour primary national ambient air quality standard out to 1.2 miles, (NB3-2) 1.4 miles (TC3-5), 2.4 miles (SH3-2), 2.4 miles (LC 3-2) and 3.8 miles (BB3-2) respectively. (Southwestern Wyoming EIS). Thus, additional control measures may be necessary to assure that the surface mining proceeds without jeopardzing air quality standards.

The Office considered lowering the mandatory air quality review below 1 million tons of coal per year for western surface coal mines. Section 169 of the Clean Air Act defines a "major emitting facility" to include sources with the potential to emit two hundred and fifty tons per year of any pollutant. Using PEDCO's emission factor of 1.2 lb/ton of coal mined, any western coal mine operation with a production level exceeding 425,000 tons per year should require an air quality review. However, the Department recognizes that to some extent portions of the fugitive dust will fall out in the permit area.

The Office considered mandatory air quality review for surface coal mines with production exceeding 3 million tons/yr. and 5 million tons/yr. However, one million tons per year of coal production from a western mine appears to be the most appropriate starting point since such an operation can result in 1,750 tons of particulate matter per year of which 15 percent or 265 tons per year can be respirable. This total emission rate, over six times the Congressional cutoff for a major emitting facility is proposed as a necessary starting point to analyze the air quality impact of large western surface mines.

Regarding application of the regulations in the east and midwest, the PEDCO report explicitly states that the developed emission factors are limited to western surface coal mines. (PEDCO report at 68). However, other studies have evaluated the fugitive dust emissions from eastern and midwestern mines. (Literature support items 3, 6, 8, 11, 26). Moreover, Peabody Coal Company, owner of some of the largest surface coal mines in the midwest and east (River King, Illinois (6.4 million tons/yr.) and Sinclair, Kentucky (3.5 million tons/yr.) has agreed that fugitive dust can be a problem locally in all coal regions. Report of the National Coal Policy Project, *Where We Agree*, (1978).

To assure that State regulatory authorities have the discretion to address such air quality problems in the midwest and east, the Department has proposed in Section 780.14(c) that the regulatory authority can require an air quality review if it determines that the proposed operation in conjunction with other major emitting facilities would cause or contribute to air pollution in excess of any applicable Federal or State air quality standards. Authority for this Subsection of the regulations is explicitly found in Sections 508(a)(9) and 515(b)(4) of the Act.

Alternatives Considered:

1. Exempt fugitive dust from regulation under the Surface Mining Act.

Advantages:

(a) Most States are not prepared for sophisticated surface mining air quality review and monitoring.

(b) The coal industry will support such a regulation.

Disadvantages:

(a) Conflicts with 515(b)(4) of the Surface Mining Act.

(b) Massive amounts of particulate matter will be emitted into the ambient air thereby degrading air quality beyond Clean Air Act standards necessary to protect public health and welfare.

(c) The failure to monitor air quality will possibly mask an air quality problem.

2. Require Best Management Practices to control fugitive dust with the goal or standard of "avoiding a public nuisance" or "good housekeeping."

Advantages:

(a) Avoids sophisticated surface mining air quality review and monitoring.

(c) May be consistent with 515(b)(4) of the Surface Mining Act.

Disadvantages:

(a) No assessment of the public health and welfare problems resulting from particulate matter emissions.

(b) No firm air quality standard to measure compliance.

3. Require air pollution assessments, monitoring and control as necessary to achieve and maintain ambient air quality standards and other applicable Federal or State air quality standards.

Advantages:

(a) Particulate matter emission control is required to the level necessary to protect public health and welfare from adverse air quality impacts (presently may exclude PSD standards).

(b) May be consistent with 515(b)(4) of the Surface Mining Act.

Disadvantages:

(a) Requires monitoring and air quality review which is probably pres-

ently beyond the capability of most States.

4. Require air pollution assessments, monitoring and control as necessary to achieve and maintain ambient air quality standards, prevention of significant deterioration standards and other applicable Federal and State air quality standards.

Advantages:

(a) Consistent with 515(b)(4) of the Surface Mining Act and Section 127 of the Clean Air Act.

(b) Implements clear congressional intent embodied in the Clear Air Act and Surface Mining Act.

(c) Assures full panoply of air quality review, monitoring and control.

Disadvantages:

(a) May be inconsistent with EPA's "fugitive dust exemption" for surface coal mines.

(b) Requires monitoring and air quality review which is probably presently beyond the capability of most States.

Option 1 was rejected because it is inconsistent with the Surface Mining Control and Reclamation Act's mandate to regulate attendant air pollution from all surface areas. Option 2 was rejected because it fails to provide a meaningful standard to protect public health and welfare from the air pollution impacts of surface coal mining operations. Option 4 was rejected because, for the present, EPA may not have included surface coal mining operations in Prevention of Significant Deterioration Regulations. *See* 40 C.F.R. Sections 51.24(b)(6), 51.24(l), 51.24(k)(5). Option 3 was selected for the foregoing reasons.

§ 780.15 Fish and Wildlife Plan.

Authority for this Section is sections 102; 205; 501; 503; 504; 507(b); 508(a); and 515(b)(2), (10), (17), (19), (23), (24) of the Act, the Endangered Species Act of 1973; and the Fish and Wildlife Coordination Act. This Section would require applicants for a permit to explain how they plan to minimize adverse impacts of the proposed operation to fish, wildlife and related environmental values. Subsection (a) would require a narrative statement on this subject. Subsection (b) would require the applicant to explain how the best technology currently available will be used, if needed, to minimize impacts of the operation after revegetation of the mine plan area. Subsection (c) would require copies of statements from applicable State and Federal fish and wildlife agencies which have reviewed the proposed impact control measures and monitoring plans. Subsection (d) would require a narrative statement on specific measures, techniques, and monitoring methods to be used to protect or enhance three categories of organisms or habitats where they exist in the proposed permit area.

These statements are necessary to allow the regulatory authority to objectively determine whether the proposed mining operation will adversely affect fish and wildlife resources and whether the applicant can comply with the performance standards of Section 816.97 of Subchapter K.

Under this section the person contemplating surface mining activities would specify how the best technology currently available will be applied to ensure that the best interests of fish and wildlife and related environmental values will be accommodated in mining and reclamation activities. It provides some latitude for the applicant, if he determines that achievement of fish and wildlife is not practicable, to show why, and to show how what he does propose, will minimize adverse impacts on those resources.

State and Federal wildlife agencies are provided an opportunity to comment on the plan's adequacy.

The plan would explain how the applicant will provide for the preservation of (1) threatened or endangered species and their habitats (2) eagles, migratory birds and game animals protected by State or Federal law and (3) unique habitats such as wetlands, riparian areas, and nesting, nursery or wintering areas. For discussion of this on the specifics of the plan, depending on the size of the mine, see the preamble to section 779.20.

Technical literature: Guidance on mitigation of surface mining impacts on fish and wildlife may be found in the document, "An Environmental Guide to Western Surface Mining Part II: Impact, Mitigation and Monitoring," FWS/OBS 78/05 Draft, which assembles information about the effects of surface coal mining on fish and wildlife and recommends ways for mitigating anticipated adverse impacts and for monitoring mitigation success and impact effects. The manual was written for the Western Energy and Land Use Team (WELUT) of the U.S. Fish and Wildlife Service to allow for reasonable decisions for the protection of fish and wildlife resources when drafting federal coal lease stipulations for surface mine development projects. Direct and indirect effects of 36 activities associated with surface mining are traced to the point of ecological impact. Existing stipulations with respect to each activity are evaluated and an approach for developing site-specific stipulations is recommended.

Another publication, "A Systems Approach to Ecological Baseline Studies," FWS/OBS78/21, 1978, defines and standardizes a holistic approach to ecological baseline studies for energy conversion projects in the western United States. The manual was written for WELUT as part of EPA's Interagency Energy/Environmental Research and Development Program. Using a detailed, step-by-step approach, the manual recommends a general process for baseline study design. To help bridge the gap between the general case and the particular, examples from various development projects are included which demonstrate the application of the techniques described.

Additional alternatives considered: One commenter has said the proposed regulations give too much discretionary power to the regulatory authority. According to this commenter without assured input from State wildlife agencies, resource management agencies and citizens, it is more than likely that fish and wildlife will not be protected. Specifically, endangered, rare, critical, and protected species may need special mention to protect species integrity.

OSM, however, proposes that the regulatory authorities be largely responsible for assuring that rare and endangered species and migratory species receive full and adequate protection. The Office has proposed a method to ensure that fish and wildlife values are addressed. Moreover State wildlife agencies will have the opportunity to assume a role of monitoring the impacts of surface mining.

OSM further proposes that, beyond the point of satisfying all the minimum requirements of existing Federal and State laws governing clean air and water standards as well as the environmental standards in the Surface Mining Control and Reclamation Act, including rare and endangered species and migratory bird protection, the States should have the perogative for deciding how far they will go to totally protect all species of fish and wildlife. The Office invites comments on how to divide the responsibility for determining best technology currently available to protect fish and wildlife resources.

§ 780.17 Reclamation plan - Introduction.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 507(c); 508(a); 510(b); 515(b) of the Act. In addition to the operations plan, blasting plan, air pollution control plan, and fish and wildlife plan called for by Sections 780.11-15, each applicant for a permit would be required to submit a reclamation plan designed to demonstrate how the applicant will comply with the environmental protection performance standards of Section 515 of the Act, Subchapter K of these regulations and the regulatory program. Elements of the reclamation plan are specified in Sections 780.19-27.

Sections 780.19-23 are mandated by the Act for all mining operations. Section 780.25 and Section 780.27 will not

apply to all applicants, but will apply to any applicant planning the use of diversion structures in the proposed operation or proposing a surface mining operation near an underground mine. Sections 780.31, 780.33 and 780.35 will also not apply to all applicants. Section 780.37 will apply to all applicants.

All of the reclamation plan requirements are necessary to enable the regulatory authority to objectively evaluate the proposed mining and reclamation operation to determine whether the operations will be conducted in compliance with the environmental protection performance standards. *See* Section 510(b)(2) of the Act.

§ 780.19 Reclamation plan—General requirements.

(1) General authority for this Section is Sections 102; 201(c); 501(b); 503; and 507(c) of the Act. Each of the 11 paragraphs of this Section is required by additional Sections of the Act cited below. Each of these paragraphs is intended to provide information for the general purpose expressed under Section 780.17.

(2) Paragraph (a) would require a detailed timetable for the accomplishment of each major step in the reclamation plan. Authority: Section 508(a)(7).

(3) Paragraph (b) would require a detailed estimate of the cost of reclamation for the proposed area with supporting calculations to be used by the regulatory authority to determine the amount of performance bonds needed under Subchapter J. Authority: Sections 508(a)(5); 509(a).

(4) Paragraph (c) would require a plan for backfilling, stabilization, compacting and grading of the proposed area with cross-sections describing the anticipated profiles and surface configuration of the post-mining permit area. Authority: Sections 507(b)(14); 508(a)(5), (10); 515(b)(3), (4), (5), (6), (8), (10), (11), (13), (17), (22).

(5) Paragraph (d) would require a plan for topsoil handling and replacement and revegetation of the proposed permit area, including at least six elements which are enumerated. Authority: Sections 507(b)(14); 508(a)(5), (10); 515(b)(5), (6), (10), (13), (17), (19), (20), (22).

(6) Paragraph (e) would require a description of the measures selected for maximizing the recovery of the coal resource from the proposed area, so that the area will not have to be disturbed in the future. Authority: Sections 508(a)(6); 515(b)(1).

(7) Paragraph (f) would require the submission of information to determine if the requirement of Section 816.103 will be complied with by the applicant. Section 515(b)(14) of the Act.

(8) Paragraph (g) would require a description with maps, of the measures to be used to seal mine openings and case or manage drill or other bore holes in the permit area. Authority: Sections 507(b) (11), (13); 508(a) (5), (13); 515(b)(10)(A).

(9) Paragraph (h) would require a description of how mining equipment and facilities will be removed from the area when their use has ended. Authority: Sections 508(a) (3), (4), (5).

(10) Paragraph (i) would require a description of the steps to be taken during the life of the permit to comply with Federal air and water laws and the State air, water, health and safety laws. Authority: Sections 508(a) (9), (13); 515(b) (4), (8), (10).

Section 780.19 is designed to aid the regulatory authority in determining whether the applicant will be able to meet the many requirements of Subchapters which are identified in the text of the section.

§ 780.21 Reclamation plan: Protection of hydrologic balance.

(1) Authority for this Section is found in Sections 507(b) (11), (13); 508(a) (5), (9), (10), (13); 515(b) (4), (8), (10), (13), (17), (18), (23); 717(b) of the Act. Paragraph (a) would require each plan to contain a narrative, description with supporting materials to assure the protection of the quality and quantity of water and the rights of present use to the water in the mine plan and adjacent areas.

(2) Paragraph (b) would require the description of Subsection (a) to include five subsidiary plans to establish how Sections 816.41–816.57 of Subchapter K will be complied with. Technical literature used in consideration of this Section was that literature also used for Section 816.41–816.57 of Subchapter K.

(3) Regarding the monitoring plan, the Office has considered two alternatives raised by commenters to the proposed monitoring requirements. Those are discussed in detail in the preamble to Section 816.42.

(4) Paragraph (c) would require that the description required by Subsection (a) include a statement (1) of the probable hydrologic consequences of the proposed mining and reclamation operation, listing the parameters to be included in that discussion and (2) the probable cumulative impacts of all anticipated mining in the area around and including the proposed operations area required by Sections 507(b)(11) and 510(b)(3) of the Act.

(5) This Section is designed to aid the regulatory authority determining whether the applicant will be able to meet the applicable performance standards of Part 816. Sections of the performance standards that the indicated permit requirements are designed to implement:

Sec. 780.21(a)	816.41
Sec. 780.21(a)(1)	816.41; 816.42
Sec. 780.21(a)(2)	816.41; 816.51; 816.52
Sec. 780.21(a)(3)	816.41; 816.51; 816.52
Sec. 780.21(b)(1)	816.41-816.44; 816.47
Sec. 780.21(b)(2)	816.41; 816.42
Sec. 780.21(b)(2)(i)	816.42
Sec. 780.21(b)(2)(ii)	816.42
Sec. 780.21(b)(3)	816.41; 816.51
Sec. 780.21(b)(4)	816.42; 816.52
Sec. 780.21(c)(1)	816.41; 816.52
Sec. 780.21(c)(2)	816.41; 816.52
Sec. 780.21(d)	816.41
Sec. 780.21(e)	816.41

§ 780.23 Reclamation plan: Post-mining land uses.

(1) Authority for this Section is Sections 102; 201; 501(b); 503; 504; 508(a)(3), (4), (8); and 515(b)(2) of the Act. This Section sets forth the criteria for the post-mining land use analysis and plan. Paragraph (a) would require each plan to contain a detailed description of the use or uses to which the land will be put following the proposed mining and reclamation operation, with a discussion of possible alternative uses and their relationship to existing land use policies and plans. Paragraph (b) would require that this description:

(a) Explain how the proposed post-mining land use will be achieved;

(b) Give the detailed management plans to be implemented, including, instances in which range land or grazing is the proposed post-mining use;

(c) Provide all the materials needed for approval of an alternative post-mining land use, where a land use different from the premining land use is proposed under Section 816.133.

(d) Show the consideration which has been given to making the entire operation and post-mining land use consistent with the plans of the surface owner and applicable State or local land use plans or programs.

(2) Each of the provisions of this Section is designed to aid the regulatory authority to judge whether the applicant will be able to comply with the performance standards of Section 816.133.

(3) Integration of vegetation map data with other environmental data such as soils and topography provides a systhesis that will be valuable in assessing the result of a proposed action on alternative land uses or alternative designs of proposed land uses.

To the fullest extent possible, the information requirements, especially in the areas of soils, threatened and endangered species habitats and archeological and historical data, should be filled utilizing existing data collected by various State and Federal agencies using standardized data collection techniques. Technical literature used for this section is the same as that used for Section 779.22 of this Subchapter.

§ 780.25 Reclamation plan: Ponds, impoundments, banks, dams, and embankments.

(1) Authority for this Section is Sections 102; 201; 501; 503; 504; 507(b); 515(b)(13), (21); 515(f) of the Act. This Section requires each reclamation plan to include specific elements with maps and cross-sections of all water-holding facilities subject to the approval of the regulatory authority under Subchapter K. These elements must cover the construction, operation, maintenance, and removal of the proposed facilities.

(2) Technical literature used in formulation of this Section included all literature used in developing sections 816.44, 816.49, 816.56, 816.81-816.85, and 816.91, 816.93 of Subchapter K.

(3) The requirements of Section 780.25 are intended to produce a thorough, well-planned design of the structures and facilities covered by this section, with proper maintenance, operational and emergency procedures provided for all aspects of the project.

(4) Paragraph (b) of section 780.25 would specify the design and plan requirements submitted for sedimentation ponds, including any sedimentation ponds intended as permanent impoundments. These requirements parallel existing State and Federal plan requirements.

(5) Paragraph (c) would cover plans for coal waste embankments to meet the standard engineering requirements of the respective performance standards.

(6) Under paragraph (d), the plan requirements for coal processing waste dams would have to reflect items necessary to determine the adequacy of the structure as specified in the Act and the performance standards of these regulations.

A foundation investigation is necessary to assure the stability of the site with respect to the ability of the foundation and soil materials to suitably support the structure. Supervision by qualified persons insures investigation will be conducted in a manner which achieves the proper balance of testing and drilling. Evaluation of springs, speeps and the design of a subdrainage system are standard engineering practice to maintain low phreatic surface and accordingly an acceptable safety factor.

Stability analyses of the embankmant, cut slopes, and natural slopes reduces the potential for failure by delineation of problem areas and initiation of remedial actions. Standard methods for testing and analysis must be utilized to achieve consistency in evaluation.

The potential for subsidence and resultant effects are required to be analysed and addressed in the plan submittal to assure the protection of the structure, persons and property downstream, and the environment.

§ 780.27 Reclamation Plan: Surface mining near underground mining.

Authority for this Section is Sections 102; 201; 501(b); 503; 504; 507(b); 508(a); 515(b); and 515(b) of the Act. This Section would require the application to contain information to enable the regulatory authority to determine whether the operation will be conducted in compliance with the requirements of Section 515(b)(12) of the Act and Section 816.79 of Subchapter K.

§ 780.29 Diversions.

The authority for this Section are found in Sections 102, 201, 501, 503(a), 504, 507(d), 508(a), 510(b) with specific reference to Section 515(b)(10), & 17, 18 and 23) of the Act. A description of all diversions to be constructed within the mine plan area would be required, to enable the regulatory authority to determine how stream channels and overland flow would be controlled in accordance with sections 816.43, 816.44 of Subchapter K.

§ 780.31 Protection of public parks and historic places.

Authority for this Section is Sections 102, 201, 501(b); 503; 504; 507(b); 508(a); 515(b); and 522(e) of the Act. This information would provide the regulatory authority with the basis for administering Section 761.12(f) of proposed Subchapter F.

§ 780.33 Relocation of use of public roads.

Authority for this Section is Sections 102; 201; 501(b); 503; 504; 507(b); 508(a); 515(b); and 522(e) of the Act. This information will enable the regulatory authority to administer the provision of Section 522(e)(4) of the Act and proposed Section 761.12(d) of Subchapter F.

§ 780.35 Disposal of excess spoil.

Authority for this Section is Sections 102; 201; 501; 503; 507; 508; 510; and 515 of the Act.

(1) Plan requirements for disposal of spoil are virtually identical for other fill placement and embankment design. For discussion of the permit requirements, *see* the Preamble for Section 780.25(d).

(2) Literature used to develop this Section was the same as for sections 816.71-816.73 of Subchapter K.

§ 780.37 Transportation facilities.

Legal Authority. This section is based on Sections 102; 201; 501(b); 503; 504; 507(b); 508(a); 510(b); 515(b); and 522(e)(4) of the Act. Movement of coal within the mine plan area, is generally accomplished by one or a combination of truck haulage, conveyor, and railroads. To determine how this will be done, Section 780.37 is being proposed. This section would ensure that transportation facilities within the mine plan area are constructed, used, and maintained in a manner which complies with Sections 816.31-816.39 of Subchapter K.

PART 782—UNDERGROUND MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Part 782 concerning permits for underground mining activities is proposed to correspond to Part 778 for surface mining activities. As such, Part 782 sets forth the minimum requirements for approval of regulatory programs for general, legal, financial and compliance information required to be contained in applications for permits, so that the regulatory authority and the interested public would be provided with a detailed understanding of the nature of the entity which will mine the coal and the nature of the entities which have ownership interests in the property to be mined. Legal authorities for Part 782 are the same as those indicated in the preceding part of this Preamble for Part 778 of this Subchapter, except to the extent that the following differences between underground mining activities has been identified by the Office.

As required by Subsections 516(a) and (d) of the Act, the Office has considered whether distinct differences exist between surface and underground mining as to the permit application contents requirements here involved. The Office has preliminarily concluded that, with the exception of one matter, no such distinct differences exist, because requirements for financial, legal, compliance and other non-technical information do not differ as between surface and underground coal mining. The single distinct difference identified is discussed in detail below. The Office emphasizes that the conclusion regarding distinct differences discussed here is tentative in nature; interested parties are invited to submit comments identifying any other known distinct differences. The Office will account for other distinct differences, if identified, in promulgating the final permanent rules.

As to right of entry and operation information under Section 782.15, the Office has identified differences between surface and underground mining. As the Office understands Section 510(b)(6) of the Act, Congress intended that the regulatory authority determination required under that section be made only with respect to the interest of surface area owners where the actual mining of coal on the surface is involved and not as to un-

derground mine workings. Accordingly, Subsection 782.15(b) would be limited to requiring information regarding the right of the applicant to conduct mining operations only where underground mining activities would involve the actual surface mining of coal and the private mineral state to be mined has been severed from the private surface estate. For example, the applicant would be required to explain its right to conduct surface mining during the development of the face-up area for an underground mine or if coal must be mined to develop roads, dams or other facilities on the surface of the ground. The applicant would not, however, have to explain its right to dig in underground workings.

PART 783—UNDERGROUND MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR INFORMATION ON ENVIRONMENTAL RESOURCES IN THE MINE PLAN AREAS AND ADJACENT AREAS

Introduction

This Part is proposed to establish the minimum requirments for regulatory program provisions for information on the enviornmental resources within the proposed mine plan area and adjacent area, which must be submitted to the regulatory authority in permit application regarding underground mining activities. This Part would provide for the submission of sufficient information to enable the regulatory authority, to determine, with the information required under Part 784, what impacts the proposed operation would have on areas within the mine plan area and adjacent areas and whether these will be conducted in compliance with the requirements of Part 817 of Subchapter K.

(1). Part 783, for underground mining activities, is proposed to correspond to Part 779. As such, Part 783 sets forth the minimum requirements for approval of regulatory programs for base-line description of environmental resources within the proposed mine plan and adjacent areas. Legal authority and the basis and purpose for Part 783 is the same as for Part 779, except to the extent that the following difference between underground mining activities and surface mining activities have been identified.

(2). The Office has, as required by Section 516 of the Act, considered whether district differences exist between surface and underground mining as to the permit application contents requirements have involved. Some differences have been indentified, which are discussed in more detail below. However, the Office will consider whether other differences exist as a result of comments received and may modify the provision of Part 783 accordingly.

(3). Regarding information on topsoil, land use, and vegetation; Part 783 has been modified from the corresponding provisions of Part 779, to limit application requirements for those items to areas affected by surfact operations and facilities. This has been done because the excavation of underground mine workings will not likely affect soil, vegetation and land uses, except where surface operations and facilities are involved.

§ 783.14 Geology description

(4). (a). Authority for this section is found in Sections 102; 201; 507(b); 508(a); 515(b); and 516 (a) and (d); of the Act. This section would implement the requirements of the Act for geologic information necessary for each application for a permit for underground mining activities.

(b). The information collected pursuant to Paragraph (a) of this Section will enable the regulatory authority to determine whether the applicant can comply with the performance standards of Sections 817.13-817.15, 817.31-817.39; 817.41-817.58; 817.59, 817.61-817.73, 817.81-817.89; 817.91-817.93; 817.99, 817.101-817.103, and 817.121-817.128. Technical literature used is the same as for Sections 779.14, with additional references cited in the following discussion. Paragraph (b) would allow for a waiver of these requirements, pursuant to Section 507 (b)(15) of the Act, when the regulatory authority already has at its disposal sufficient geological data about the proposed mine plan area to make further data collection unnecessary.

(c). The detail to which each applicant would be required to describe the geology of the mine plan area and adjacent area would depend upon the complexity of the region, specific demands on current and future land uses and hydrologic regime, and the proposed method of mining. A fairly elaborate statement, discussing the alternative methods for evaluating the geologic features and the intensity of chemical and physical analyses, will be necessary to produce adequate information.

Consideration was given to establishing the most informative exploration techniques, such as geophysical, geochemical, aeroborne, and number and location of core samples to be required under this Section. It was decided to propose separate requirements for the mine plan area, by division of two distinct operating units when describing the underground coal mining and reclamation operation. These are: (1) those areas affected by surface operations and facilities; and, (2) those lands overlying where extraction of coal will occur, but where no direct land excavation would be expected.

(d). Those areas affected by surface operations and facilities, to be defined in Section 701.5 of this Chapter, require detailed geological analyses for several reasons. The physical properties of the disturbed overburden (consolidated or unconsolidated) must be determined to develop the necessary parameters to design structurally stable surface facilities associated with underground mining activities, such as fills, dams or embankments. Secondly, the chemical content of the disturbed overburden must be established, to ensure that the operations and facilities are conducted so as to prevent deterioration of surface or groundwater resources.

(e). Regarding surface areas which would overlie underground mine workings, it was decided to propose requiring detailed information on the bedrock overburden overlying the proposed mine working area, so that a comprehensive subsidence control plan could be developed. Sufficient geologic data is necessary in that regard, to determine the bearing strength capacity of natural or artificial support structures, as well as the effectiveness of these structures over a period of time or as influenced by inundation of the mine after cessation of operations.

Rock mechanics tests of overburden from the coal to the surface are necessary to establish the stability of the overburden once the coal is removed. Tests specified in Part 784.14(c) as being required, include, but not limited to: triaxial compressive strength tests, grain size analysis, slaking tests in air and water, and angle of internal friction of all major lithologic units overlying the coal. Rock and soil mechanics analysis of the overburden column overlying coal is essential in areas of underground mining, because such an analysis is the only tool available to predict the timing and amount of the onset of subsidence once coal is removed. That subsidence over mined voids will occur is nearly a certainty; all the scientific aid available should be brought to bear on its occurrence.

Triaxial testing is the most reliable test of compressive strength for the purpose at hand, inasmuch as the confining pressure may be varied with the vertical compression. This is desirable, because as *Dunrud and Osterwald (1978, p. 22)* state, "Many * * * rocks (from the Powder River Basin of Wyoming) which were tested for point load strength, were too weak even for confined compressive strength testing * * *" *Lambe and Whitman (1969, p. 36)* state that triaxial testing is preferable to unconfined testing in standard rock and soil mechanics analysis because of its greater dependability.

Grain size analyses and angle of internal friction are necessary to predict

strength of rock and geometry of failure of rock and soil when subjected to tensile or compressive stress prior to mining. These tests allow characterization of bedrock and unconsolidated material (*Dunrud and Osterwald, 1978, p. 22; Bureau of Reclamation, 1973, p. 600*).

Slaking tests, properly called slaking durability index tests, are designed to simulate, in an accelerated way, failures due to wetting, drying, and abrasion of rocks subjected to atmospheric stresses (*Franklin and Chandra, 1972, p. 337*).

The Office requests comment and will work with MHSA to determine whether information already required by MHSA on roof stability would satisfy this requirement in whole or in part.

Technical references used were:

(i) Dunrud, S.R., and Osterwald, F.W., 1978, Effects of coal mine subsidence in the western Powder River Basin, Wyoming: U.S. Geol. Survey Open-File Report 78-473, 71 p.

(ii) Franklin, J.A., and Chandra, R., 1972, The slake durability test: Internat. jour. Rock Mechanics and Mining Sci. v. 9, no. 3, p. 325-338.

(iii) Lambe, T.W., and Whitman, R.V., 1969, Soil Mechanics: New York, John Wiley 553 p.

(iv) U.S. Bureau of Reclamation, 1973, Design of small dams: Dept. Interior, Washington, D.C., 2nd edition, 816 p.

(f). For the area overlying underground mine workings, chemical analysis of the coal seam and lower part of the overburden will be needed to determine whether the coal seam will be acid or iron-bearing, so that appropriate mine drainage controls can be planned for as part of the proposed operations. This information would be obtained through chemical analysis of the coal samples and strata immediately around the seam. The principal elements to be analyzed, initially, include the various combinations of iron sulfide and associated elements. *See U.S. Department of Agriculture Handbook No. 523 of Agriculture Handbook No. 525; U.S.E.P.A. Manual for Testing Overburden and Mine Spoils* 1978.

PART 784—UNDERGROUND MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR RECLAMATION AND OPERATIONS PLAN

Introduction

Part 784 for underground mining activities is proposed to correspond to Part 780 for surface mining activities. Part 784 sets forth the minimum requirements for approval of regulatory program provisions for mining operations and reclamation plans. Legal authority for this Part and the basis and purpose is the same as for Part 780, except to the extent that the following differences between underground mining activities and surface mining activities have been identified.

The Office has, as required by Section 516 of the Act, considered whether distinct differences exist between surface and underground mining for these permit application requirements. Some differences have been identified and are discussed in detail below. Also, because the order of individual sections of Part 784 is not the same as for Part 780, appropriate identification and cross-referencing is provided.

The Office will consider whether other differences exist as a result of comments received and may modify the provisions of Part 784 accordingly.

Air Quality Control Plan

1. The Office has tentatively decided not to reqire detailed air quality control plans under Part 784, because of the lack of data on the national and regional impacts of underground mining activities on air quality.

The Office has decided not to require blasting plans for underground mining activities, because of the infrequency of surface blasting associated with those activities.

§ 784.12 General requirements for reclamation and operations plan.

3. The authority, basis and purpose of this section are the same as these for section 780.19 of this Subchapter.

§ 784.13 Protection of hydrologic balance.

4. The authority, basis and purpose of this section are the same as for section 780.21. In addition, this section provides for long-term control of permanent seals of waters inundating abandoned underground mine operations, by requiring appropriate plans as part of the application.

These plans would contain the information needed by the regulatory authority to determine if the proposed operations can be conducted during and after mining, to meet the requirements of sections 817.13-817.15 of Subchapter K.

First, for new mines in acid or iron-bearing coalseams, locations of entries must be specified to preclude gravity discharges. See section 516(b) of the Act. Particularly important for the regulatory authority, will be sufficient soils, geologic and hydrology data to assess whether mine entries can be reasonably expected to hold seals for the long-term period after cessation of mining, in view of the historic experience with the difficulties in maintaining those seals without leakage or collapse.

If these plans cannot establish that drainage will be held within the underground workings, then the applicant would, of course, be required to propose adequate plans for the use of necessary treatment facilities to ensure that mine drainage is discharged out of the underground working in accordance with section 817.42 of Subchapter K.

The following technical literature supports this requirement:

(1) Ciolkosz, E. J. and L. T. Kardos, 1973, *Soil as a Medium for the Renovation of Acid Mine Drainage*, Office of Water Resources Research.

(2) Doyle, 1978 *Mine Sealing, Deep Coal Mining Waste Disposal Technology*, Noyes Data Corporation, Park Ridge, N.J., 1970

(3) Garrett, W.S. and Campbell, L. T., 1961, *Design and Construction of Underground Bulkheads and Water Barriers*, 7th Commonwealth Mining and Metallurgical Congress, Johannesburg, Vol. 3, 1283-1301;

(4) Halleburton Company, *New Mine Sealing Techniques for Water Pollution Abatement*, Federal Water Quality Administration, U.S. Department of Interior.

(5) Holuber and Penrose 1977, *Laboratory Study of Self-Sealing Limestone Plugs for Mine Openings*, EPA 4043019-73-011 and 67012-73-081.

(6) Moebs, N. N. and Krickovic, S., 1970 *Air Sealing Coal Mines to Reduce Water Pollution*, BOM RI 7354;

(7) USEPA, 1975, Criteria for Developing Pollution Abatement Programs for Inactive and Abandoned Mine Sites, EPA-440/9-75-008;

(8) USEPA, 1973, Processes, Procedures and Methods to Control Pollution from Mining Activities, EPA-430/9-73;

§ 784.14 Reclamation and operations plan: Post-mining land uses.

5. The authority basis and purpose of this section are the same as for section 780.23 of this Subchapter.

§ 784.15 Operations and reclamation plan: Ponds, inpoundments, banks and dams and embankments.

6. The authority, basis and purpose of this section are the same as for 780.25 of this Subchapter.

§ 784.16 Protection of public parks and historic places.

The authority, basis and purpose for this section are the same as for Section 780.31 of this Subchapter.

§ 784.17 Relocation or use of public roads.

The authority, basis and purpose for this Section are the same as for section 780.33 of this Subchapter.

§ 784.18 Underground Development Waste.

The authority, basis and purpose of this section are the same as for section 780.35 of this Subchapter.

§ 784.19 "Subsidence Control Plan."

(a). Authority for this Section is Sections 102, 201(c); 501(b); 503(a); 405; 507(b); 508(a); 510(b); 515(b); and 516 of the Act. Section 784.19 would set out minimum requirements for subsidence control plans in permit applications for underground mining activities. The subsidence control plan must show that the operation will be conducted in compliance with the requirements of Sections 817.121–817.126 of Subchapter K. The application materials are proposed to be required according to the following:

(1) Contain a description of the subsidence control technology to be used,

(2) Be designed according to recognized standards,

(3) Explain how material damage is to be prevented,

(4) Consider relevant geotechnical and land use factors, and

(5) Contain a plan for monitoring subsidence.

The goal of Section 784.19 is to prevent material damage to the land surface by subsidence (Section 516(b) of the Act) and insure that underground mine operators adopt the most technologically and economically feasible measures to control subsidence (Sections 102; 501(b); 516(b)(1), of the Act).

(b). Haphazard mining without consideration of the effects of subsidence can, and has resulted, in substantial material damage to private dwellings, public buildings and utilities, water quality, farmland and enviromental values. Effective control of subsidence requires that mining be conducted according to an organized, comprehensive plan of action, specifically designed to prevent unacceptable damage. The essential details of this plan would be contained in this "subsidence control plan".

(c). The types of technical information that the Office believes are needed to be set forth in an adequate subsidence control plan are based on a review of the literature in the field. This information would include:

(i) The results of a survey of surface structures or resources that might be damaged by subsidence to establish a base-line,

(ii) Determination of the maximum allowable ground lowering and strains which the structures and resources can withstand,

(iii) Design of mine workings to keep ground lowering and strains within allowable limits and/or provisions for surface structures and resources to withstand the induced ground lowering and strains, and/or other provisions to limit subsidence such as backfilling of mine voids,

(iv) Design and installation of a subsidence monitoring network that will allow determination of ground lowering and strains imposed on structures and resources,

(v) Measurement of the initial vertical and horizontal location of the subsidence network to a degree of reasonable precision,

(vi) Monitoring of the subsidence networks during mining to assure maximum allowable ground lowering and strains after mining, including,

(vii) Assessment of subsidence caused damage and implementation of any necessary repairs.

(d). Each of these elements is necessary to prevent subsidence causing material damage (Section 516(b)(1) of the Act) and known technology exists to implement each element. Standards, accepted practice, or known examples are available for each element to aid mine operators in designing subsidence control plans and assure quality control in their implementation. Preparation of plans according to recognized professional standards is necessary to assure that mine operators adopt subsidence control measures that are consistent with known technology and effective in preventing material damage to the extent feasible (Section 516(b)(1) of the Act). Precedent for requiring subsidence control plan standards is provided by the *Pennsylvania Bituminous Mine Subsidence and Land Conservation Act of 1966* (*Ref. 28*).

(e). Well defined standards exist for the surveying requirements of Section 784.19. Standards defining allowable deflections and strains for various types of structures are available in literature (Ref. 3, 4, 24, 26). Although the relationship between mining and the development of surface ground strains has not been precisely defined and additional research is required, remarkably consistent relations are found in European subsidence experience (Ref. 23) which can be applied to American longwall mining. Experience from Pennsylvania (Ref. 29) is believed to be applicable to the standard American room and pillar method of mining. Certification of plans by registered engineers or geologists is necessary to ensure plans are prepared according to professional standards.

(f). Technical literature used to develop Section 784.19 was:

1. Hill and Bates, "Acid Mine Drainage and Subsidence—Health and Ecological Effects of Increased Coal Utilization", Resource Extraction and Handling Division, Industrial Environmental Research Laboratory-Cincinnati, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268, 1977.

2. Michael Baker Co., et al., "A Comprehensive Program for Dealing with Mine Subsidence", ARC Report 73–163–2559, the Pennsylvania State University, Middletown, Pennsylvania, for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1976.

3. National Coal Board (British), "Subsidence Engineers Handbook", London, 1966, 1974.

4. Michael Baker Co., Inc., Architectural Measures to Minimize Subsidence Damage, ARC Report 73–111–2551, for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1974.

5. HRS–Singer, Inc., "Overview of Subsidence Potential in Pennsylvania Coal Fields", ARC Report 73–111–2552, State College, Pennsylvania, for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1975.

6. Grey, R.E., et al., "State of the Art of Subsidence Control", ARC Report 73–111–2559 (prepared by General Analytics, Inc., Monroeville, Pennsylvania), for the Appalachian Regional Commission, Washington, D.C., and the Department of Environmental Resources, Harrisburg, Pennsylvania, 1974, Part 2.

7. Earth Satellite Corp., "Use of Photo Interpretation and Geological Data in the Identification of Surface Damage and Subsidence", ARC Report 73–111–2554, for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1975, pages 35–37.

8. Mullin L. Lonergan Associates, Inc., "Local and State Regulatory Powers Dealing with Land Use and Construction in Subsidence Prone Areas", ARC Report 73–163–2557, for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1975, Appendix A.

9. U.S. Congress, 95th, 1st session, House Rept. 95–218, 1977, Surface Mining Control and Reclamation Act of 1977, Report of the Committee on Interior and Insular Affairs, House of Representatives, to accompany H.R. 2, p. 126.

10. U.S. Department of Interior, 1976, Final environmental impact statement on surface subsidence control in mining regions: U.S. Bureau of Mines FES 760–58, 90 p.

11. National Coal Board, 1963, Principles of subsidence engineering: Production Department Information Bull 63/240, 21 p., London, UK.

12. Dunrud, C.R.12. Dunrad, C.R. 1976. Some engineering geologic factors controlling coal mine subsidence

in Utah and Colorado: U.S. Geological Survey Professional Paper 969, 39 p.

13. Brauner, G., 1973, Subsidence due to underground mining; I. Theory and practices in predicting surface deformation: U.S. Bureau of Mines Info-Circ 8571, 55 p.

14. Battelle Columbus Laboratories, 1975. A systems approach to underground mining: Phase I—Problem analysis and research recommendations, 282 p.

15. Campbell, J. A. L., et al., 1975, How to predict coal mine roof conditions before mining: Mining Engineering, October, p. 37-40.

16. Vandale, A. E., 1967, Subsidence—a real or imaginary problem: Mining Engineering, September, p. 86-88.

17. Horn, G. H., 1977, Memorandum on subsidence requirements-coal: U.S. Geological Survey memo to mining supervisors.

18. Allen, A. S., 1976, Basic questions concerning coal mine subsidence in the United States: Assn. Engr. Geologists Meeting, April 1976, 19 p.

19. Amuedo and Ivey, "Ground Subsidence and Land Use Considerations Over Coal Mines in the Boulder-Weld Coal Field, Colorado", Ameudeo and Ivey Geological Consultants, 1975.

20. G.A.I. Consultants, Inc., "Study and Analysis of Surface Subsidence Over the Mined Pittsburgh Coal Bed", report prepared for U.S. Department of Interior, Bureau of Mines under contract no. J0366047, Monroeville, Pa., July 1977.

21. Wardell, Kenneth, "Ground Subsidence and Control", *Mining Congress Journal*, January, 1969, pp. 36-43.

22. Kratzsch, Helmut, "Reduced Subsidence by Planned Extraction", Bergbau-Archiu (Essen), Vol. 25, No. 5, December 1964, pp. 15-21.

23. Panek, Louis A., "Methods and Equipment for Measuring Subsidence", Third Symposium on Salt, The Northern Ohio Geological Society, Inc., Cleveland, Ohio, 1966.

24. Voight, Barry and Pariseau, William, "State of Predictive Art in Subsidence Engineering", Journal of the Soil Mechanics and Fondation Division, Proceedings of the American Society of Civil Engineers, March, 1970, pp. 721-750.

25. Legget, R.F., Duisburg Harbour Lowered by Controlled Coal Mining", Canadian Geotechnical Journal, 9, 374, 1972, pp. 874-882.

26. Brauner, Gerhard, "Subsidence Due to Underground Mining—2. Ground Movements and Mining Damage", U.S. Bureau of Mines Information Circular 8572, 1973.

27. "Bituminous Mine Subsidence and Land Conservation Act of 1966". Commonwealth of Pennsylvania (Department of Environmental Resources), Harrisburg, Pa.

28. Curtis, S.E., "Talk Presented at the Roof Control Committee Meeting of the American Mining Congress, Pittsburgh, Pa., September 18, 1968," U.S. Department of the Interior, 1976, Final Environmental Impact Statement on Surface Subsidence Control in Mining Regions, U.S. Bureau of Mines.

§ 784.20 Protection of fish and wildlife.

11. The basis and purpose for this section are the same as for Section 780.15 of this Subchapter.

§ 784.21 Diversions.

12. The authority, basis and purpose for this section are the same as for Section 780.29 of this Subchapter.

§ 784.22 Maps and plans.

13. The authority basis and purpose for this section is the same as for Section 780.13 of this Subchapter.

§ 784.23 Transportation Facilities.

14. The authority, basis and purpose of this section is the same as for Section 780.37 of Subchapter K.

§ 784.25 Return of Coal Processing Waste to Abandoned Underground Workings.

15. Authority for this section is Sections 102; 201; 501; 103; 504; 507; 508; 510; 515 and 516 of the Act.

(a). An alternative method for alleviating potential subsidence problems and disposing of coal processing wastes that would otherwise be left on the surface is to use these materials to backfill voids in abandoned underground mines. The waste material provides lateral support to mine pillars and vertical support to the mine roof and overburden, and helps stabilize the surface. The major methods of backfilling are controlled, blind, and pumped slurrying (DOI, 1976).

2. *Controlled flushing* is used in mines in which men can safely enter and gain access to key areas for the filling operations. Generally about one borehole per 4 acres is required for slurry placement (Whaite and Allen, 1975).

3. *Blind Flushing* can be used where abandoned mine openings are inaccessible because of flooding or extensive caving. Granular material is injected into the mine voids by gravity feed. Most blind flushing projects have required hundreds of holes because of the limited amount of material that can be emplaced through any one hole (Whaite and Allen 1975).

4. *Pumped Slurrying.* A new technique for flushing of inaccessible mine workings utilizes pumped slurry injected from the surface. (Condeub, Fleissig, and Associates 1973, Whaite and Allen 1975).

5. *Fly ash* has also been used in subsidence stabilization (Magnuson et al. 1970, Sturges and Clark 1970; Michael Baker 1973, p. 349).

6. The requirements of sections 784.25 would be:

(a) development of a mine back-filling plan;

(b) description of waste material and area to be backfilled;

(c) description of hydrologic factors and

(d) additional application to pneumatic backfilling.

OSM specifically requests comments and will consult with MHSA to determine the safety considerations of each of these practices to the workers at the particular mine and adjacent miners.

7. Bibliography of technical literature used to develop projections:

(a). Baker, Michael Jr., "Analysis of Pollution Control Costs", Prepared for the Appalachian Regional Commission, February 1973, p. 347-349.

(b). Candeub, Fleissing and Associates, Demonstration of a technique for limiting the subsidence of Land Over Abandoned Mines, November 1973, NTIS No. PB212708.

(c). Cochran, William, "Mine Subsidence Extent and Cost of Control in a Selected Area", USBM IC8507, 1971.

(d). Jacobsen et al., "Subsidence Monitoring in Conjunction with Underground Mine Flushing Operations", Final Report USB Contract S0144073, October 1975.

(e). Magnuson et al, "Utilization of Fly Ash for Remote Filling of Mine Voids", Paper presented at the 2nd Ash Utilization Symposium, Pittsburgh March 10-11, 1970.

(f). Sturges and Clark; "Fly Ash—The Answer to Mine Subsidence Protection?", Coal Mining and Processing, April 1970.

(g). Whaite and Allen AS; "Pumped—Slurry Backfilling of Inaccessible Mine Workings For Subsidence Control", USBM IC 8667, 1975.

PART 785—REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES OF MINING

Introduction

(1) In addition to drawing the general distinction between surface and underground mining activities under the Act, Congress also imposed particularized requirements for a number of special categories of coal mining. To account for these special categories in the context of establishing minimum requirements for permit system components of regulatory programs, the Office proposes to promulgate Part 785 of Subchapter G. Because the provisions of Part 785 are interrelated to proposed performance standards applicable to the special categories covered in Subchapter K, the reader is cautioned to carefully review Part 785 together with the preamble and pro-

posed texts for Parts 818 through 828 of Subchapter K.

(2) These special permit requirements are in addition to those general permit requirements contained in Subchapter G. Those general requirements apply under Part 785, unless a special permit requirement in this Part is inconsistent with a general requirement. For instance, an applicant seeking a permit under Section 785.17 of this Part containing a variance from approximate original contour would have to meet the requirements of Part 778, but would not, in the map to be filed under Part 780, have to demonstrate how the land to be mined would be restored to its approximate original contour. Instead, it would have to show what alternative post-mining surface configuration would be used.

(3) In selecting the categories of coal mining which are specially regulated in the Act for coverage in Part 785, the Office has decided to propose special permitting regulations for all of those categories covered by the Act, except for coal mines in Alaska. Although special provision is made for Alaskan coal mines at Section 708 of the Act and special environmental protection performance standards for that mining are being proposed by the Office at Part 821 of Subchapter K, the Office does not believe it appropriate to propose special permit regulations for Alaskan mining at this time.

The decision to omit Alaskan coal mining from special permits coverage is primarily based upon the narrowness of special treatment made available for this mining under Section 708 of the Act during the permanent regulatory program. Under Section 708(a) of the Act, the Secretary was directed to contract with the National Academy of Sciences for an in-depth study of Alaskan coal mining to determine whether any of the provisions of the Act should be modified by future act of Congress. This study is to be completed by August 3, 1979.

Under subsections (c) and (d) of section 708, the Secretary is authorized to make certain modifications to the environmental protection provisions of the Act or regulations adopted pursuant thereto. However, as the Office interprets those subsections, they do not necessitate the issuance of special permitting regulations. First, under Section 708(c) the Secretary is authorized to make modifications to environmental provisions of the Act or regulations adopted thereunder for mines in existence for a year prior to the Act, only until 1 year after the completion of reports required under Sections 708(a)–(c) of the Act or 3 years after the date of enactment of the Act (August 3, 1980), whichever comes first. Given the very few mines to which this modification authority would be applicable, and the cut-off of that authority, in any event, early in the permanent regulatory period, the Office has tentatively concluded that special permits regulations under Part 785 are unnecessary for implementation of Section 708(d) of the Act. To the extent that special procedures are needed for implementation of Section 708(d) under the permanent regulatory program, ample provisions to implement that section are being proposed at Part 821 of Subchapter K.

Similarly, regarding the Secretary's authority under Section 708(e) of the Act to promulgate special regulations under Section 501(b) of the Act, the Office believes that sufficient provision to implement that authority is being made by proposal of Part 821. That Part would establish detailed procedural and substantive criteria, by which the types of modifications envisioned under Part 708(e) can be accounted for. In the event, however, that further study of the Alaskan coal issue discloses the need for special permitting requirements, the Office will consider appropriate amendments to Part 785.

As for those special categories of coal mining that the Office has decided warrant special consideration in the permitting processes of regulation programs, a detailed analysis follows for Part 785.

§ 785.3 Responsibilities.

Authority for this section is Sections 102; 201(c); 501(b); 502(a); 507(b); 508(a); 510(b), (d); 515(b), (c), (d), (e); 516; 527; 529 and 711 of the Act. This Section explains the responsibilities of regulatory authorities and persons seeking to operate coal mines covered by Part 785. If a State is to allow any of the special categories of mining contained in Part 785, its State program provisions would have to meet the minimum requirements set forth in this Part for that particular type of mining. It is understood that some States may not allow for any of the special categories of mining and that some may allow only a few of the special categories. Where a Federal program is promulgated by the Secretary for a particular State, the provisions of Part 785 would be the minimum requirements for permitting special categories of mining under that program.

Section 785.3 also explains that, although special treatment is provided in Part 785 for special categories of coal mining, all other provisions of Subchapter G will be applicable to persons who seek to operate a mine in these special categories, unless specific exemption from a particular provision of Subchapter G is provided for in Part 785. This is provided to ensure that the individual sections of Part 785 are not generally construed to be waivers from the other Parts of Subchapter G.

§ 785.11 Anthracite surface coal mining and reclamation operations.

Authority for this section is found in Sections 102; 201(c); 501(b); 503(a); 507(b); 508(a); 510(b); 509; 515(b); 516 and 529 of the Act. This section will apply exclusively to those persons seeking to engage in anthracite surface coal mining and reclamation operations in Pennsylvania under a regulatory program for that State and is proposed to implement Section 529 of the Act.

1. Section 529 of the Act makes applicable to anthracite coal mines special environmental protection performance standards and certain bonding requirements of Pennsylvania law in effect on August 3, 1977, in lieu of the performance standards and equivalent bonding requirements otherwise in effect under the Act. Given the legislative history of that section of the Act and the Office's understanding that such special provisions of State law existed, as of August 3, 1977, only for the Commonwealth of Pennsylvania, the Office proposes to implement Section 529 only with respect to anthracite coal mining in Pennsylvania.

2. Under paragraph (b) of Section 785.11, permits for anthracite coal mining and reclamation operations in Pennsylvania would have to be applied for and issued according to the provisions of the Pennsylvania anthracite regulatory program in effect on August 3, 1977, only insofar as special anthracite environmental protection performance standards and bonding provisions are involved. Under Section 529(a) of the Act, special treatment is afforded for anthracite coal mining only with respect to performance standards and for specified bond limits and the period of responsibility for revegetation.

Thus, the Office is proposing that the permitting of anthracite coal mines in Pennsylvania which would otherwise be required under Subchapter G be modified only to the extent to which the requirements of Subchapter G which depend upon the generally-applicable requirements of Subchapter J (Bonding) and K (Performance Standards) must be modified to account for the special anthracite bonding and performance standards found at Parts 809 and 820 of this Chapter.

3. Under Section 529(a) of the Act, provision is made for the amendment of special anthracite regulations adopted by the Secretary under the Act, to account for changes in the special Pennsylvania anthracite regulatory program after August 3, 1977. Accordingly, authority to adopt neces-

sary additional anthracite permits regulations is proposed at paragraph (c) of Section 785.11.

§ 785.12 Special bituminous surface coal mining and reclamation operations.

1. Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 507(b); 508(a); 510(b); 515(b) and 527 of the Act. This section would apply to persons engaging in "special bituminous coal mining" in Wyoming, as defined in Part 701, and would implement Section 527 of the Act. Under that Section, the Secretary is authorized to issue regulations establishing special environmental protection performance standards for mines covered by that section, in lieu of those standards otherwise applicable under Section 515 of the Act. For the permanent regulatory program, the Office is proposing special environmental protection performance standards for "special bituminous coal mines" at Part 825 of Subchapter K. To ensure that permits would be applied for and issued according to those environmental protection performance standards, the Office is proposing Section 785.12.

2. As is the case for anthracite coal mines, the Office emphasizes that by establishing this Section, special treatment for the mines involved is afforded only to the extent that the requirements of Subchapter G were affected by modification of the otherwise applicable environmental protection performance standards of Subchapter K under the provisions of Part 825. Therefore, all other requirements of Subchapter G would apply to the permitting of special bituminous coal mines in Wyoming, except insofar as a modification were needed with respect to Part 825.

3. Under Section 527(b) of the Act, provision is made for the amendment of special bituminous coal mine regulations adopted by the Secretary under the Act, to account for changes in the special Wyoming regulatory program for those mines after August 3, 1977. Authority to adopt necessary additional special bituminous coal mining permits regulations is proposed at paragraph (d) of Section 785.12.

§ 785.13 Experimental practices mining.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 507(b); 508(a); 510(b); 511(c); 513(a); 515(a),(b); 516; 517 and 711 of the Act. This Section is proposed to implement Section 711 of the Act and would apply to persons who wish to conduct mining under regulatory programs through the use of experimental practices involving deviations from the environmental protection performance standards of Sections 515 and 516 of the Act, Subchapter K, and the regulatory program.

1. Through Section 711 of the Act, Congress has created a narrow process for granting exemption from compliance with otherwise applicable environmental protection performance standards under the Act, to serve either of two purposes, on an experimental basis. One purpose is to encourage advances in mining and reclamation technologies. The other is to allow for a post-mining land use for industrial, commercial, residential or public use (including recreation facilities). However, because these exemptions may be allowed only ". . . in individual cases on an experimental basis, . . .", and only if approved by the Secretary, the Office has concluded that experimental practices should be authorized only under a permit issued in accordance with sufficient protective requirements. Accordingly, the Office proposes to implement Section 711 under regulatory programs by Section 785.13.

The Office believes that experimental practices should be allowed by regulatory authorities only under the precautions afforded by a permit system, in order to ensure for the "individual" determination and Secretarial approval required by the Act. Under a regulatory program permit system, detailed legal, financial, compliance and technical information would have to be presented to the regulatory authority prior to the commencement of operations. *E.g.* Sections 507, 508 of the Act; Parts 778-780; 782-784 of this Subchapter. Careful scrutiny of the proposed operation would be aided under a permitting system, through opportunity for public participation. *E.g.* Sections 513, 514 of the Act; Parts 788, 789 of this Subchapter. It is through these information and procedural requirements that the Office believes Section 711 should be implemented, so as to maximize the possibility of success of experimental practices and to minimize the probability that ill-conceived proposals will be conducted. *See* Section 510(b) of the Act; Section 785.13(d) of the regulations.

2. Paragraphs (a) and (b) describe the scope and objectives of Section 785.13. Under paragraph (c), the term "experimental practices" is defined, because it is used throughout this Section. The Office has proposed this definition upon the basis of the language of Section 711 of the Act, which is interpreted to limit allowable exceptions from the environmental protection performance standards to those conducted on an experimental basis.

3. Under paragraph (e) of Section 785.13, special permit application contents requirements for authorization of the use of experimental practices are proposed, in order that the regulatory authority and the Secretary are presented with the record necessary to make a determination of whether the criteria for approval of the experimental practice under Section 711 of the Act and paragraph (g) of Section 785.13 have been met. Sub-paragraphs (1) through (4) of paragraph (e) are based upon the explicit statutory criteria required for approval of an experimental practice under Section 711. Sub-paragraph (5) is based upon the Office's authority to ensure that all coal mining operations subject to the Act utilize adequate data monitoring and reporting procedures. Section 517 of the Act.

4. Under paragraph (f), it is proposed that an applicant seeking approval of an experimental practice specifically describe the exact nature of the deviation from otherwise applicable standards involved in the newspaper advertisement of the filing of a permit application required by Sections 507(b)(6) and 513(a) of the Act and Section 787.11 of this Subchapter. In addition, the regulatory authority would be required to specifically describe the experimental practices in the notifications issued to public entities and other persons as required by Section 513(a) of the Act and Section 787.11 of this Subchapter. The purpose of these requirements would be to ensure that the goal of the Act of involving maximum public participation in important decisions by the regulatory authority is fulfilled.

5. The criteria for approval or denial of the use of an experimental practice in the course of the regulatory authority's determination of whether to issue or deny a permit are proposed at paragraph (g) of Section 785.13. The burden of proof on original permit applicants will, of course, rest on the applicant as required by Section 510(a) of the Act.

The criteria for approval that are identified at subparagraph (g)(1), by cross-reference to paragraph (e) of Section 785.13, are those criteria specifically required by Section 711 of the Act and the need to ensure adequate data monitoring and reporting under Section 517 of the Act with respect to the use of the experimental practice. The requirement of subparagraph (g)(2) is proposed to ensure that the proposed experimental practice is both well-planned and will meet the purposes of the Act, by allowing for only those operations involving "feasible" reclamation.

Finally, under subparagraph (g)(4), the regulatory authority would be required to specifically condition the permit so as to ensure, for inspection and enforcement purposes, that the approved experimental practice can be clearly identified in the field, adequately surveilled, and is not used in a

fashion more broadly than that intended by Section 711.

6. Under paragraph (h) of Section 785.13, a minimum triennial review of each experimental practice permit would have to be conducted by the regulatory authority, to ensure that the criteria for authorizing the use of an experimental practice under Section 711 and paragraph (g) of Section 785.13 are, in fact achieved during the actual use of the experimental practice in the course of surface coal mining and reclamation operations.

This provision is intended to be implemented as part of the mandatory periodic review of outstanding permits by regulatory authorities required by Section 511(c) of the Act. If the regulatory authority found it necessary to require a revision or modification to a permit involving an experimental practice, it would be authorized to issue an order to ensure that the revision or modification is made, subject to the permittee's right to a hearing under Section 511(c). The manner and time of the hearing would be largely left to the discretion of the State in developing its State program. For Federal programs, the specific detailed requirements for the hearing would be left for promulgation in the regulations for each particular Federal program. However, the Office will consider whether the final rules for Part 785 should set more detailed minimum requirements on the time and manner of these hearings and specifically solicits comments on this issue.

§ 785.14 Steep slope coal mining.

Authority for this section is sections 102; 201(c); 501(b); 503(a); 504; 507(b); 508(a); 510(b); 515(b)(3), (4), (10), (22) and 515(d) of the Act. This section would apply to persons conducting "steep slope" surface coal mining and reclamation operations under regulatory programs and is proposed to implement Section 515(d) of the Act. Under that section of the Act, "steep slope" coal mines are required to comply with certain environmental protection performance standards, in addition to those required under Section 515(b) of the Act.

To ensure that the permitting of "steep slope" coal mines under regulatory programs is done to fully account for those additional environmental protection performance standards, the Office is proposing special permitting requirements at Section 785.114. Under the permanent regulatory program, the special performance standards for steep slope mines will be established under Part 826 of Subchapter K. The reader should, therefore, review this preamble and proposed Section 785.14 in conjunction with Part 826.

1. Under paragraph (b) of Section 785.14, the term "steep slope" is to be defined by cross-reference to the definition for that term at Section 701.5 of Subchapter A. For the detailed explanation of the basis and purpose of the definition see the preamble to that Section.

2. Under paragraph (a) of Section 785.14, all steep slope mines are covered by the other paragraphs of the section, with three exceptions. The first exception, explained in subparagraph (a)(1), is explicitly provided for by the first half of the proviso clause in the main text of Section 515(d) of the Act. The second exception, for mountaintop removal mining at paragraph (a)(2), is similarly based on the second half of the proviso clause in the main text of Section 515(d). Mountaintop removal mining permits are addressed separately at Section 785.15.

The third exception, which is at subparagraph (a)(3) of Section 785.14, pertains to surface coal mining and reclamation operations which, although conducted on steep slopes, are allowed a variance from the requirement of restoration of the affected area to approximate original contour under Section 515(e) of the Act. The permitting of mines which require these variances are addressed separately in Part 785 at Section 785.16.

3. Under paragraphs (c) and (d) of Section 785.14, the regulatory authority will be required to find, in order to issue a permit, that, in addition to proposing compliance with the general performance standards of Part 816, the applicant has demonstrated in the application that the operation will meet the requirements of the special performance standards applicable to steep slope mines proposed at Section 826.12 of Subchapter K.

§ 785.15 Mountaintop removal mining.

Authority for this section is Sections 102(b),(c),(d),(e); 201(c); 501(b); 503(a); 504; 507(b); 508(a); 510(b); 511(c); 515(b),(2), (3),(4),(10),(17),(21),(22); and 515(c). This section provides for permitting mountaintop removal mining.

1. Under Section 515(c)(1) of the Act, a State program is allowed, but not required to permit mountaintop removal mining. Accordingly, for those States which desire to allow for mountaintop removal mining under their State programs, the Office is proposing Section 785.15 to establish the minimum requirements for the Secretary's approval of the permitting components of those State programs for mountaintop removal. In addition, Section 515(c)(1) of the Act requires that any Federal program contain provisions to permit mountaintop removal mining. Section 785.15 is proposed to provide for minimum permit requirements for mountaintop removal mining which would be included within particular Federal programs.

2. Section 515(c)(3) and (4) establishes special environmental protection performance standards applicable to mountaintop removal mining. The Office is proposing to implement those provisions of the Act through Part 824 of Subchapter K. The reader should, therefore, consider this preamble and proposed Section 785.15 in conjunction with proposed Part 824.

3. The conditions under which a State regulatory authority will be authorized to issue a permit for mountaintop removal mining are proposed at paragraph (c) of Section 785.15. The provisions of subparagraph (c)(1) of this section are based on the express provisions of the main text of Section 515(c)(3) of the Act. The Office emphasizes that the types of post-mining land uses listed at subparagraph (c)(1) are the only uses authorized for mountaintop removal mining under the Act, particularly because Section 515(c) is an exception under which mountaintop removal mining is not required to conform to the Act's general requirement for restoration of the land disturbed by mining to its approximate original contour. As an exception, these provisions are to be strictly construed and the Office does not, therefore, believe that the list of acceptable post-mining land uses at Section 515(c)(3) of the Act could be broadened through administrative interpretation.

4. Four conditions are proposed at subparagraph (c)(1) of Section 785.15 on the approval of an acceptable post-mining land use for mountaintop removal mining. The first condition, at subparagraph (c)(i) is taken verbatim from the text of Section 515(c)(3)(A) of the Act.

The second condition, at section 785.15(c)(1)(ii), requires the applicant to demonstrate that the proposed post-mining use would meet the requirements of the general environmental protection performance standards at section 816.24, for approval of a post-mining use different from the premining use. Section 785.15(c)(1)(ii) is proposed principally to implement the requirements of Section 515(c)(3)(B) of the Act, which requires that an applicant for mountaintop removal mining present, according to seven criteria, specific plans and appropriate assurances in the permit application for its proposed post-mining land use. These criteria are found, as proposed for implementation by the Office, with other requirements for alternative post-mining land uses at Section 816.124, which Section 785.15(c)(1)(ii) adopts by cross-reference. The basis and purpose of those

criteria are, in general, explained in the preamble to Section 816.124.

However, it is appropriate to explain here the Office's consideration of one of the criteria identified at Section 816.124, because concern has been expressed as to that matter only in the context of mountaintop removal mining. This item is the requirement that, prior to issuance of a permit, it must be demonstrated that the proposed post-mining land use is supported by letters of financial commitment from third parties for the development and maintenance of the proposed use. Section 816.124(d). This requirement is identical to a provision of the interim regulatory program (30 CFR Section 715.13(d)(4) and is based on Sections 515(b)(2) and 515(c)(3)(B)(v) of the Act.

In light of comments that obtaining such letters will be very difficult in the southern Appalachian States, the Office has considered its authority for this requirement at Section 816.124. It has concluded, based on a review of the legislative history of the Act, that Congress intended that this requirement must be fulfilled for all mountaintop removal mining prior to the issuance of a permit. *See* H.R. Rep. No. 95-218, 95th Cong., 1st Sess. 94, 124 (1977). The Office's view of this matter has also been sustained by the courts in a challenge to the interim program regulations. *Surface Mining Regulation Litigation*, 11 ERC 1593, 1606 (DDC., 1978). Therefore, the Office proposes to include this requirement for the permanent regulatory program.

The third and fourth conditions for approval of the post-mining land use under paragraph (c) of Section 785.15 are based on the express wording of Sections 515(c)(3)(C) and (D) of the Act and are at Section 785.15(c)(1)(iii)-(iv).

5. Under Section 515(c)(4) of the Act, the regulatory authority is required to insure that permits issued for mountaintop removal mining will include certain special environmental protection performance standards. As explained above, those standards are being proposed at Part 824 of Subchapter K. Therefore, as a condition of issuing a permit, the Office is proposing at Section 785.15(c)(2) that the applicant establish that the proposed mountaintop removal operations be conducted in compliance with Part 824, in place of complying with the general requirement for returning the land to be mined to its approximate original contour.

6. To ensure that the requirements of Part 824 are, in fact, complied with by persons obtaining permits under State programs for mountaintop removal mining and to aid State and Federal inspectors in identifying these mines, the Office proposes Section 785.15(c)(3) and (5). Subsection (c)(3) would require that the State regulatory authority make the provisions of Part 824 a specific written condition of any mountaintop removal permits. Subsection (c)(5) would require that the permit be clearly marked as authorizing mountaintop removal mining. In addition, Section 785.15(c)(4) is proposed to implement the requirements of Section 515(c)(3)(E) of the Act.

7. Under Section 515(c)(6) of the Act, the regulatory authority is required to periodically review mountaintop removal mining permits, unless the applicant affirmatively establishes that the operations involved are being conducted in compliance with all applicable provisions of law, including the terms and conditions of the permit. Under Section 511(c) of the Act, the regulatory authority is generally required to conduct periodic review of all outstanding permits for the same purposes as under Section 515(c)(6). To implement these provisions of the Act, in part, with respect to mountaintop removal mining permits under regulatory programs, the Office proposes to establish paragraph (d). This provision is intended for these permits to supplement proposed Section 790.11 of this Subchapter, the regulation which would generally implement Section 511(c) of the Act.

Under subparagraph (d)(1), the regulatory authority would have to review mountaintop removal mining permits within three years both from the date of original issuance and renewal of the permit, to ensure that mountaintop removal mining receives the continued long-term scrutiny that Congress intended, particularly as to the implementation of the approved post-mining land use and development of the associated valley or head-of-hollow spoil disposal site. Review by the regulatory authority would, of course, have to be conducted prior to these three-year periods under Section 790.11, if the times prescribed by that Section occur earlier with respect to particular permits.

Paragraph (d), as proposed, incorporates the provisions of Section 515(c)(6) of the Act that review by the regulatory authority of mountaintop removal mining permits need not occur, if the permittee demonstrates compliance with all applicable provisions of law. It should be noted, however, that Section 511(c) of the Act contains no similar exemption, and, therefore, when mountaintop removal mining permits would be subject to review under Section 790.11 of this Subchapter, the regulatory authority would have to, in fact, conduct that review.

The legal authority afforded the regulatory authority under Section 511(c) of the Act to modify a permit, following periodic review, is proposed to be implemented, at subparagraph (d)(2), for special reviews of mountaintop removal mining permits under Section 785.15. It is intended that modifications made to those permits under State program provisions implemented pursuant to (d)(2) will be subject to the notice and hearing requirements of Section 790.11, in order to afford appropriate due process protection to the permittee.

8. Under Section 515(c)(5) of the Act, the regulatory authority is required to promulgate certain specific regulations for the issuance of mountaintop removal mining permits. Paragraph (e) of Section 785.15 is proposed to implement that section of the Act.

§ 785.16 Variances from approximate original contour.

Authority for this section is found in Sections 102 (b), (c), (d), (e); 201(c); 501(b); 503(a); 504; 507(b); 508(a); 510(b); 511(c); 512 (b), (2), (c), (4), (21), (22); 515 (d), (e) of the Act. This section concerns permits incorporating variances from approximate original contour in steep slope surface coal mining; and reclamation operations other than mountaintop removal, and is intended to implement Section 515(e) of the Act.

1. Under Section 515(e) of the Act, the regulatory authority is authorized to issue permits incorporating variances from the requirement of restoring the land disturbed by mining to its approximate original contour. Because it is a variance available under section 515(e)(2) from the approximate original contour restoration requirement of Section 515(d)(2), specifically applicable to steep slope surface coal mining, the variance is available only for steep slope surface coal mining and reclamation operations. Therefore, the Office proposes that Section 785.16 be applicable only to steep slope surface coal mining and reclamation operation under regulatory programs.

2. It is recognized that under Section 515(e)(1) of the Act, State programs may, but are not required to, allow for variances for steep slope mining from the requirement of restoration to approximate original contour. However, if such variances are to be allowed by a State, they must conform to the requirements of Section 515(e). Those states that wish to allow for these variances would, therefore, have to include provisions, at a minimum, which meet the requirements of section 785.16. Section 515(e)(1) also provides that only Federal program must allow for variance under that section. Section 785.16 would establish minimum requirements for inclusion in particular Federal programs to govern the award of these variances.

3. The term "steep slope" as used in Section 785.16 has the same meaning as that at Section 515(d)(4) of the Act and also proposed for adoption at Section 785.14(b) of this subchapter and Section 701.5 of Subchapter A. As in the case of the exceptions given for this term at sections 785.14(a)(1)-(2) and Part 826, the term "steep slope" as used in section 785.16 will not, of course, include these cases where either only an occasional steep slope is encountered or an operation is permitted as mountaintop removal mining. *See* Section 515(d) of the Act.

4. Sections 515(e)(1)-(4) would establish certain special environmental protection performance standards applicable to those steep slope mines which are proposed for variances from the requirement of restoration to approximate original contour. The Office is proposing to implement these performance standards at section 826.13 of subchapter K. This preamble and proposed Section 785.16 should thus be read in conjunction with proposed Section 826.13.

5. Two principal reasons were articulated by Congress for authorizing variances from restoration to approximate original contour under Section 515(e) of the Act. The first, was to allow for use of the land to be mined, after reclamation, ". . . suitable for an industrial, commercial, residential or public use (including recreational facilities)." Sections 515(e) (1), (2), (3), (A) of the Act. Second, was to improve control of the watershed of the land affected by the mining. Sections 515(e) (1), (3)(c) of the Act. Paragraph (e) of Section 785.16 emphasizes those purposes and is proposed to state the objectives of this Section.

6. As Congress stated in section 515(e)(2) of the act, the types of post-mining land uses for which variances may be authorized under section 515(e) are limited to ". . . an industrial, commercial, residential, or public use (including recreational facilities)." As this list is included as a condition to the grant of an exception to the general requirement of restoration of land disturbed by mining to its approximate original contour, this category of post-mining land uses is to be construed narrowly. The Office does not believe this list can be expanded upon and proposes Section 785.16 as limited to the types land-uses specifically identified at Section 515(e)(2) of the Act. *See* sections 785.16(c), (d)(1).

7. Under section 515(e), several specific pre-conditions would be placed upon the grant of a permit incorporating a variance under that Section. Under Section 510(b) of the Act, the regulatory authority is required to find, before issuing any permit, that the applicant has proposed to conduct its operations in compliance with all applicable provisions of the Act and regulations. To implement the conditions imposed by section 515(e) and to ensure that the regulatory authority is provided with the information needed to make the necessary determinations under Section 510(b), the Office proposes paragraph (d) of Section 785.16. This paragraph would establish seven specific pre-conditions to the issuance of a permit under Section 515(e) of that act and Section 785.16 of Subchapter G.

8. The first condition, subsection (d)(1), relates to the proposed post-mining land use for the operations involved. The main text of that subsection is taken from the wording of section 515(e)(2) of the act. Proposed subsection 785.16(e)(i) is based upon the exact wording of Section 515(e)(A) of the act.

In addition, under section 785.16(d)(1)(ii), the applicant must demonstrate that the proposed post-mining land use will meet the requirements of the general environmental protection performance standards proposed at section 816.124, for approval of a post-mining use different from the pre-mining use. Section 785.16(d)(1)(ii) is proposed to implement the requirement of Section 515(3)(B) of the act, requiring a sound design of the post-mining use. This specific criteria is found, as proposed for implementation by the Office, with the other requirements for alternative post-mining land uses at Section 816.124, which Section 785.16(d)(1)(ii) adopts by cross-reference. The basis and purpose of all of those requirements are, in general, explained in the preamble to section 816.124.

9. The second condition to issuance of a permit with a variance under Section 785.16 is as subsection (d)(2) and relates to a demonstration that watershed control of the lands within the proposed permit area will be improved by the proposed operations. This is based upon Sections 515(d)(1) and 515(d)(3)(C) of the Act. As proposed, Section 785.16(d)(2) would identify two specific situations in which watersheds would be deemed "improved". The first is a resulting reduction in the discharge of pollutants from the proposed permit area to ground or surface waters and is based on certain of the environmental protection performance standards of the Act, in which Congress indicated that such a result is beneficial. *See* Sections 515(b)(8)(C); 515(b)(10)(A)(ii), (B)(i); 515(b)(17). The second situation is where flooding hazards within the watershed are reduced by a reduction in peak period discharges from precipitation runoff and is also based on congressional concern, expressed in the Act, that the hazard to the public safety and property from flooding in surface mined areas in hilly terrain be reduced in operations conducted under the Act. *See* Sections 101(c); 515(b)(8); 515(b)(10) of the Act.

These two specific instances under which watershed control would be deemed improved are, of course, tentative and the Office will consider proposals for additional, similar criteria. Those criteria must, however, be those which are reasonably administrable, particularly so that the benefits occurring to watershed control can be practically ascertainable as judged from points before, during, and after steep slope coal mining.

10. The third condition to issuance of a permit under Section 785.16 is proposed at subsection (d)(3), as the requirement of specific written consent of the surface owner to the award of a variance. This is based on the wording of section 515(d)(2), where such written consent is required. As proposed, this requirement would have to be made in a document separate from that proffered by the applicant to meet the conditions of section 510(b)(6) of the Act and Section 778.15 of this Subchapter, regarding the right of the applicant to conduct surface coal mining operations with the permit area, where ownership of the surface and mineral estates have been served. Consent to a variance under Section 785.16 would have to be made separately from that addressed by Sections 510(b)(6) of the Act and 778.15, to ensure that the surface owner is afforded sufficient opportunity to clearly understand the rights involved and to avoid confusion of persons who may review the permit application, including interested members of the public.

11. Under Sections 515(e) (1), (2) and (4), the regulatory authority is required to ensure that permits issued for variances under Section 515(e) will include certain special environmental protection performance standards. As explained above, these standards are being proposed at Section 826.13 of Subchapter K. Therefore, as a condition of issuing a permit, the Office is proposing at Section 785.16(d)(4) that the proposed operation will be conducted in compliance with Section 826.13 of subchapter K, in place of compliance with the general requirement of Section 515(d)(2) of the Act for returning the land to its approximate original contour.

12. To ensure that the requirements of Section 826.13 are, in fact, complied with by persons obtaining permits under regulatory programs with variances under Section 515(e) of the Act, and to aid State and Federal inspectors in identifying these mines, the Office proposes Section 785.16(d)(5)-(6). Subsection (d)(5) would require that the regulatory authority make

the provisions of Section 826.13 a specific written condition of any permit issued under Section 785.16. Subsection (d)(6) would require that the permit be clearly marked as authorizing a variance from approximate original contour. In addition, Section 785.16(d)(7) is proposed to ensure that only those variances authorized by the Act would be approved by the regulatory authority.

13. Under Section 515(e)(6) of the Act, the regulatory authority is required to periodically review permits, including variances under that section, unless the applicant affirmatively establishes that the operations involved are being conducted in compliance with all applicable provisions of law, including the terms and conditions of the permit. Under Section 511(c) of the Act, the regulatory authority is generally required to conduct periodic review of all outstanding permits for the same purposes as under Section 515(e)(6). To implement these provisions of the Act, in part, with respect to permits including variances awarded under Section 515(e) under regulatory programs, the Office proposes to establish paragraphs (e) and (f) of Section 785.16. Paragraph (e) is intended, for these permits, to supplement proposed Section 790.11 of this Subchapter, the regulation which would generally implement Section 511(c) of the Act.

Under paragraph (e), the regulatory authority would have to review all permits within three years both from the date of original issuance and renewal of the permit, so as to ensure that the operations involved receive the continued long-term scrutiny that Congress intended, particularly as to the implementation of the approved postmining land use and development of any associated valley or head-of-hollow fill spoil disposal site. Review by the regulatory authority would, of course, have to be conducted prior to these three-year periods under either paragraph (e), or section 790.11, if the mid-term of the permit occurs prior to three years. Paragraph (e), as proposed, incorporates the provisions of Section 515(e)(6) of the Act, where review by the regulatory authority of mountaintop removal mining permits need not occur, if the permittee demonstrates compliance with all applicable provisions of law. It should be noted, however, that Section 511(c) of the Act contains no similar exemption and, therefore, when permits including variances under Section 515(e) would be subject to review under Section 790.11 of this Subchapter, the regulatory authority would have to, in fact, conduct that review.

The legal authority afforded the regulatory authority under Section 511(c) of the Act to modify a permit, following periodic review, is proposed to be implemented at paragraph (f) for special review of permits issued under Section 785.16. It is intended that modifications made to those permits under State program provisions implemented pursuant to (f) will be subject to the notice and hearing requirements of Section 790.11, in order to afford appropriate due process protection to the permittee.

14. Under Section 515(e)(5) of the Act, the regulatory authority is required to promulgate certain specific regulations for the issuance of permits authorizing variances from approximate original contour. Paragraph (g) of section 785.16 is proposed to implement that section of the Act.

§ 785.17 Prime farmlands.

Introduction.

(1). This section contains requirements for a permit where land to be mined may be prime farmland. The requirements intended to insure that prime farmland will be identified and adequate plans developed by the person conducting mining operations to ensure return of the land to equal or better agricultural production than before mining. This section provides for a pre-application reconnaissance inspection to determine whether prime farmland may be involved, for a negative determination if prime farmland is not involved, procedures for the application to follow if prime farmland may be involved, a reclamation plan development for mining and restoration of prime farmland and criteria for issuance of a permit for mining of prime farmland.

2. The Department proposes to require operators to comply with performance standards equivalent to Section 515(b)(7) (prime farmlands) for permits issued prior to the date of enactment of the Act, or to any revisions or renewals thereof, or to any existing surface mining operations for which a permit was issued prior to the date of enactment of the Act, if the regulatory authority finds that such mining is being conducted on prime farmlands.

Under the Act, all surface coal mining operations during a Federal or State program must comply with Sections 515(b) (2), (5) and (19). Section 515(b)(2) requires the land to be "restored to a condition capable of supporting the uses which it was capable of supporting prior to any mining or higher or better uses * * *" Section 515(b)(5) requires the topsoil and such other strata be removed, segregated and preserved if such a practice is shown to be more suitable for vegetation requirements. Section 515(b)(19) requires a permanent vegetative cover of the same seasonal variety native to the area of the land to be affected. To implement these performance standards on prime farmland the Department proposes to implement Part 823 of Subchapter K.

3. The Department has considered the applicability of Section 515(d)(2) (Grandfather clause) in the permanent program and determined in light of the requirements of Sections 515(b) (2), (5) and (9) of the Act that this Section was intended to cover solely permit requirements for surface coal mining during the interim regulatory program. This construction of the grandfather clause is consistent with congressional intent, because the requirements imposed by the proposed regulations are believed to not prohibit mining which was ongoing as of August 3, 1977. See also *Surface Mining Regulation Litigation* Civil Action No. 78-162 (Mem. Op at 19) (May 3, 1978). Other statutory authority for this determination is found in Sections 507, 508, 510(b), 511 and 516.

The Department invites comments with supporting data on whether this interpretation of the Act will in fact prohibit any existing surface coal mining.

4. Legal Authority for this section is Sections 102; 201; 501(b); 503(a); 504; 507(b) (11), (16); 508(a) (2), (3), (4), (5), (8), (13); 510(b), (d); and 515(b) (2), (5), (6), (7), (19), (20) of the Act. This section would apply to all surface coal mining and reclamation operations on prime farmlands.

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U.S. Soil Conservation service, 1951, Soil Survey Manual—pH, p. 235, 360, 361, 362; organic matter, p. 245-250; texture, p. 297; soil fertility, nitrogen, phosphorous, and potassium, p. 336; U.S. Department of Agriculture, Agriculture Handbook no. 18, 503 p.

U.S. Soil Conservation Service, 1975, Soil Taxonomy—a basic system of soil classification for making and interpreting soil surveys; U.S. Department of Agriculture, Agriculture Handbook no. 436.

U.S. Soil Conservation Service, 1976(b). List of Published Soil Surveys: Washington, D.C., U.S. Soil Conservation service, 16 p. (Duplicated Report).

6. Under Section 510(a) of the Act, the regulatory authority is required to make certain special findings before issuing permits, if the area proposed to be mined contains prime farmland. That Section requires the Secretary, in consultation with the Secretary of Agriculture, to promulgate implementing regulations. Section 785.17 is being proposed as the permit system component of those implementing regulations. In addition, other implementing regulations are being proposed at Parts 701 and 823 of this Chapter, relating to definitions and special environmental protection performance standards, respectively. The reader should consider Section 785.17 closely with the relevant provisions of proposed Parts 701 and 823.

7. Paragraph (a) explains the scope of Section 785.17. As a general rule, Section 510(d)(1) of the Act makes special prime farmland permit provisions applicable to all surface coal mining and reclamation operations on lands which are prime farmlands.

The Office has considered whether underground mining activities should be exempted from the prime farmlands provisions of Section 785.17. Tentatively, the Office has concluded that underground mining activities should not be exempted for the following reasons.

First, it has been suggested that the Office may exempt underground mining activities from the requirements of Section 510(a)(1) of the Act under the provisions of Section 516(d) of the Act, which allow for modifications to the Office's regulations on the basis of distinct differences between surface and underground mining activities. However, with respect to permits, Section 516(d) of the Act limits allowable modifications to ". . . permit *application requirements* (and), permit approval or denial *procedures . . .*," (*emphasis supplied*) which the Office does not believe extends to permit approval or denial criteria. Because Section 510(d) of the Act specifies such criteria, the Office does not believe that it has the authority under Section 516(d) of the Act to exempt underground mining activities from the requirements to be proposed under Section 785.17.

Even assuming that legal authority for an exemption existed, the Office has not been presented with information establishing that sufficiently distinct differences between surface and underground mining activities exist with respect to prime farmland protection. Indeed, upon inquiry by the Office to the U.S. Soil Conservation Service, the Administrator of the Service reported that the adverse effects on prime farmland from underground mining activities have been observed to be severe, particularly from the effects of subsidence. Further, the administrator has reported that prime farmland topsoil can be adequately stockpiled, even for the length of time that surface areas may be disrupted by underground mining activities. *See* letter of R. M. Davis, Administrator, U.S. Soil Conservation Service, June 12, 1978, to W. N. Heine, Director, OSM.

8. Definition of soil survey. Under Section 507(b)(16) of the Act, a soil survey may be needed to be provided

in permit applications in some situations for the regulatory authority to determine whether the mine plan area contains prime farmland. Paragraph (b) of Section 785.17 is proposed to specifically define the term "soil survey" for those purposes. The basis for defining the term is to ensure that commonly-accepted methods, shown to be repeatable and verifiable, are used by regulatory authorities to make accurate and consistent determinations of whether lands proposed to be mined contain prime farmland. As stated in paragraph (b), "soil survey" is defined to mean a map showing the distribution of soils in the mine plan area. The technical criteria to be used to prepare these maps are listed in the technical materials identified in paragraph (b).

9. Pre-application reconnaissance investigation. Section 517(b)(16) of the Act requires the making of a reconnaissance survey to determine whether the application should contain a soil survey. Paragraph (c) of Section 785.17 is proposed to implement this requirement. The particular items of information which would be required to be addressed in the pre-application investigation are those which will enable the regulatory authority to preliminarily determine under paragraph (d) that either no soil survey is needed, because the lands in the mine plan area are clearly not prime farmland and entitled to a negative determination under paragraph (f), or to determine that a soil survey is needed, because the result of the reconnaissance inspection does not clearly exclude the mine plan area from the prime farmland category.

10. Paragraph (d) of section 785.17 is proposed to implement the requirement of Section 507(b)(16) that an application contain a soil survey, if the reconnaissance investigation suggests the mine plan area may contain prime farmland. Based on the results of the survey, the regulatory authority would decide whether the mine plan area definitely contains prime farmland, which would require that under Section 510(d)(1) of the Act the applicant file a plan for restoration of the lands. *See* paragraph (e) of Section 785.17.

11. *Small plots exemption.* The Office is considering as a potential alternative whether mine plan areas containing small parcels of prime farmland or parcels that are clearly economically insignificant could be excluded from detailed soil survey and restoration plan requirements. Under this alternative, the applicant could proceed to file an application merely upon the basis of a reconnaissance inspection, requesting a negative determination. The basis for this alternative would be:

(1) The belief that soils removed from small inclusions of prime farmland within a mine plan area might be better used to maintain or improve the productivity of other portions of the mine plan area, rather than to recreate a small, isolated, and economically unmanageable unit of prime farmland;

(2) The theory that small isolated parcels of prime farmland which may exist along the periphery of a mine plan area do not have a long-term productive relationship to either the rest of the mine plan area or to adjacent lands.

12. *Restoration plan contents.* Paragraph (e) of Section 785.17 is proposed to implement the provisions of Section 508(a)(5) and 510(d)(1) of the Act. Under this section the applicant would provide a plan for the restoration of prime farmland to be mined.

(a) The regulation would require the plan to identify each soil map unit comprising the prime farmland and contain a description of each unit. The map units and the descriptions which are to be used are those developed by the National Cooperative Soil Survey, which is the only source of such information based on known National standards. This part of the regulations also requires U.S. Soil Conservation Service to review the units and descriptions contained in the plan, which is the logical alternative, since that agency is primarily responsible for developing them.

(b) In order to determine whether the proposed mining operations will be conducted in compliance with the performance standards in Section 823.11, the application must contain a profile description of the A, B, and C horizons, of the topsoil to a depth that collectively constitute the root zone of the locally adapted cultivated crops. The other alternative considered was to require descriptions to a depth of 4 inches or to bedrock, whichever is less, to describe the horizons that constitute the root zone. The first alternative was selected, although the Office recognizes that if only the soil horizons that collectively constitute the root zone of locally adapted cultivated crops are described, the depth of horizons described would be more dependent on the crop grown than on the depth of soil. Thus, for root growth, if one was growing alfalfa for hay or a seed crop, the depth might be 20 feet. For wheat, it might be only 24 inches.

(c) The unique combination of climate and soil characteristics, which are blended together to create prime farmland, are difficult to duplicate. However, a provision is included in 785.17(e)(4) to allow an applicant to submit scientific data to the effect that spoil other than the A, B, or C horizons can be used, when it can be shown to be as effective in restoring the productivity of the prime farmland as the use of the A, B, or C horizons would be. The rationale here would be to allow for the opportunity to reconstruct more productive land with material other than the prescribed A, B, and C horizons, if it can be demonstrated that the substitute material is equally or more productive.

(d) The applicant must include the seeding or cropping procedures for the final graded land, which will adequately control erosion, regardless of the season of the year in which the regrading is completed. This may consist of an annual cover crop to improve soil and aeration and return organic matter to the surface, or the land could be put immediately back into crop production. Under any circumstance, the applicant must show that the planned land treatment will have the effect of returning the productivity of the land to its premining condition, as required by Section 508(c)(2) and 515(b)(2) of the Act.

13. *Criteria for negative determination.* This subsection is authorized by 507(b)(16) of the Act and describes situations where a negative determination of prime farmland can be made. In any activity involving surface mining, a pre-application investigation is necessary to determine if prime farmland, as defined in Section 701.5(8) of this Chapter may be involved. There are essentially five criteria in determining if the land involved does not contain prime farmland. The first four criteria relate to portions of the prime farmland definition that may be determined without the need of a soil survey and the last alternative relates to situations where a soil survey is available.

(a) The first criterion involves the historical use portion of the prime farmland definition (*See* Section 701.5). If a pre-application investigation, as required in Section 785.17(c), determines that the land has not been historically used for cultivated crops a negative determination may be requested, and no additional investigation is required.

(b) If a pre-application investigation determines that the slope of the lands is greater than 10 percent, a negative determination may be requested. This measurement must be made according to the procedures outlined in Sections 779.25(i) or 783.25(i) of the regulations, regarding slope measurements. The definition of prime farmland in Section 701.5 states that soils qualifying as prime farmland are such that the product of K (erodibility factor) times the percent slope is less than 2. The experience of U.S. Soil Conservation Service scientists indicates that all soils on slopes of greater than 10 percent, regardless of rainfall, are ex-

cluded from prime farmland. Soils with K factors less than 2 would not be shown as prime farmland, because their water holding capacity is such that they would not be identified as prime farmland. Soil Conservation Service scientists have had primary responsibility in the preparation of over 1,000 published soil surveys. Thus, a negative determination with respect to slopes greater than 10 percent is a reasonable situation to consider in a reconnaissance inspection of an area to request a negative determination. If a soil survey is available, the map unit descriptions would verify whether the concerned areas have slopes greater than 10 percent.

(c) If an investigation establishes that the average annual precipitation is 14 inches or less and the land is not irrigated or naturally subirrigated, and has no developed water supply that is dependable and of adequate quality, a negative determination may be requested. This aspect of the pre-application investigation relates to the definition of prime farmland in 701.5 and also the definitions of "subirrigated" in 701.5(a)(4). Soils with aridic or torric moisture regimes are in sections of the country where the average annual precipitation is 14 inches or less. Experience gained in many published USCS Soil Surveys has shown that the commonly grown cultivated crops can not be produced in 7 or more years in areas with 14 inches or less average annual precipitation, unless the soils are irrigated or naturally subirrigated. Therefore, soils with aridic or torric moisture regimes are excluded from the definition of prime farmland, unless they have a developed irrigation water supply that is dependable; and of adequate quality.

The phrase "or naturally subirrigated" is included for those soils where the average annual rainfall is 14 inches or less, but because the soils have a natural zone of saturation that delivers water to the roots from underneath, these soils may have an aquic moisture regime, and therefore may be defined as prime farmland. If the pre-application investigation determines that the average annual precipitation is 14 inches or less, that the soils are not irrigated or naturally subirrigated, and there is no developed water supply that is dependable and of adequate quality, a negative determination of prime farmland may be requested.

(d) The fourth criterion for a negative determination relates to other criteria of prime farmland that may be determined without a soil survey. These are the determination of frequency of flooding of the land involved and the characteristics of the surface layer which are readily determined such as the amount of coarse rock fragment. The prime farmland definition would exclude soils which are flooded frequently during the growing season. Section 701.5. Frequently flooded is defined as flooding occurring more often than once in 2 years. Therefore, if soils subject to flooding are involved and records indicate these soils are subject to frequent flooding, these soils would be excluded from prime farmland.

Also, Section 701.5(8)(3)(ix) pertains to a characteristic of soil that may be determined without a soil survey. This part of the prime farmland definition relates to the amount of rock fragments coarser than 3 inches. Experience has shown that if the amount of rock fragments coarser than 3 inches is greater than 10 percent, the use of equipment necessary for planting, cultivating and harvesting is curtailed unless the coarse rock fragments are removed. The removal of these coarse rock fragments is generally uneconomical.

(e) The fifth criterion for a negative determination would apply when a soil survey of lands within the mine plan area is available and this survey indicates there are no soil map units that have been designated prime farmland by the U.S. Conservation Service. Over 65 percent of the Nation has had soil surveys completed. This includes over 1,000 published soil surveys. The list of published soil surveys is published by the United States Department of Agriculture, Soil Conservation Service and is periodically updated.

14. *Consultation with the Secretary of Agriculture by the Regulatory Authority.* Under Section 510(d)(1) of the Act, the regulatory authority is required to consult with the Secretary of Agriculture before issuing a permit for the mining of prime farmland. Paragraph (g)(1) of Section 785.17 is proposed to implement that requirement.

15. *Permit approval or denial criteria.* Paragraph (g)(2) is proposed to establish the minimum criteria for issuance of a permit authorizing the mining of prime farmland. The first criterion, Subsections 715.17(g)(2)(i)-(ii), is based upon the explicit requirements of Section 510(d)(1) of the Act. The fourth criterion, finding that the applicant will comply with the special environmental protection performance standards for prime farmland of Part 823 of Subchapter K, is also based on Section 510(d)(11) of the Act which requires a showing that the soil reconstruction standards of Section 507(b)(6) of the Act, upon which Part 823 is based, will be met.

The third criterion, at Section 715.17(g)(2)(iii) is that the proposed post-mining land use must be for prime farmland. This is based on the Office's careful examination of the Act's legislative history. That examination reveals that the Act requires that prime farmland be restored to a state capable of agricultural yield equivalent to or higher than that of surrounding prime farmland.

Under Section 510(d)(1) of the Act, a permit may be issued for the mining of prime farmlands, as defined in Section 701(20), only upon a finding that the operator has the technological capability to restore such mined area, within a reasonable time, to equivalent or higher levels of yield as non-mined prime farmland in the surrounding area under equivalent levels of management and can meet the soil reconstruction standards in Section 515(b)(7) of the Act. *See also* 42 Fed. Reg. 62693 (1977) (to be codified in 30 C.F.R. Section 716.7). The Act requires in Section 515(b)(7) that, when prime farmlands are mined, the topsoil and other soil horizons suitable for plant growth be segregated and replaced over spoil material. The Act further provides that a permittee's performance bond shall not be released "until soil productivity for prime farmlands has returned to equivalent levels of yield as non-mined land of the same soil type in the surrounding area under equivalent management practices . . ." Section 519(c)(2).

Both the wording and content of these provisions suggest that the prime farmland is to be restored for agricultural production. Such an interpretation appears unavoidable in light of the soil reconstruction standards based on plant growth, the requirement of restoration of soil productivity and the comparison of the yield after reclamation to the yield of surrounding non-mined prime farmland.

In testimony before the Senate Public Lands and Resources Subcommittee, the Secretary stated that he favored an amendment requiring "restoration of soil productivity for prime agricultural lands." 123 Cong. Rec. S 5862 (daily ed. April 18, 1977). Subsequent discussion in Congress of the prime farmland provisions indicates an intent, similar to that of the Secretary, to avoid loss of the soil productivity of the land and to restore its agricultural yield. 123 Cong. Rec. S 8104, 8108, 8111 (daily ed. May 20, 1977).

After the House and Senate Conferees had agreed upon the final language of the surface mining bill, they explained in the Conference Report the thought behind the prime farmland provisions:

> "It is the intention of the Conferees that the written finding that the regulatory authority is required to make before a permit is granted to mine on prime farmland can be based in part on the expert opinion of the regulatory authority, the operator has the technological capability to perform the soil reconstruction standards of Section 515(b)(7)

and the performance of those standards will result in the restoration of the mined area to equivalent or higher levels of agricultural yield as non-mined prime farmland in the surrounding area under equivalent levels of management."

H.R. Rep. No. 493, 95th Cong., 1st Sess. 105 (1977). *See also* 123 Cong. Rec. S 12201 (daily ed. July 18, 1977); 123 Cong. Rec. H 7591 (daily ed. July 21, 1977).

Upon the basis of this legislative history, the Office believes that the Act requires, as a prerequisite to mining on prime farmland, that there be a finding of capability to restore the area to equivalent or higher levels of agricultural yield as prime farmland. Concomitantly, the Act requires actual reclamation of these lands for agricultural use as prime farmlands.

§ 785.18 Surface mining concurrent with underground mining.

Authority for this section is Sections 102, 201; 501(b); 503(a); 504; 507(b); 508(a)(5), (9); 510(b); 511(c); 515(b)(12), (16) of the Act. This section would apply to permit applications for combined surface and underground coal mining, where the applicant desires a variance from the requirement to reclaim the affected land as contemporaneously as practicable so as to conduct underground mining activities. This variance would allow the operator to use part of the highwall established by surface mining to begin his underground operations. Applicants for such a variance would be required to file complete applications for both the surface and underground operations showing why they are necessary for maximum recovery of coal and how they will avoid multiple disturbances of surface lands. The application would have to identify the area for which the variance is sought and the particular regulations from which the variance is sought. The applicant would have to assess the adverse environmental impacts of the variance and show how the spoil not used for contemporaneous backfilling will be stored.

The regulatory authority would be allowed to grant a permit for such a variance, if it finds that the plans are feasible, and coal recovery will be maximized to avoid repeated surface disturbance. It must also be found that there will be no on-site or off-site environmental damage resulting from the delay in reclamation. Liability under the performance bond would have to be continued for the duration of the combined surface and underground coal mining activities. Permits containing such variances shall be reviewed at least once every three years by the regulatory authority.

§ 785.19 Alluvial valley floors.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 507(b)(11), (13); 508(a)(3), (4), (5), (13); 510(b); 515(b)(2), (10) of the Act. This section would apply to surface coal mining and reclamation operations on or adjacent to alluvial valley floors in arid or semi-arid areas of the country west of the one-hundredth meridian.

(1) Under Section 510(b)(5) of the Act, the regulatory authority is required to make certain specified findings as to whether proposed mining operations would adversely affect alluvial valley floors and uses thereof located west of the 100th meridian. Regulations to implement that section of the Act are being proposed at Section 786.17 of Subchapter G. Under Sections 507(b) and 508(a) of the Act an applicant is required to furnish detailed information in permit applications regarding preservation of the hydrologic balance. Under Section 515(b)(10) of the Act alluvial floors are part of those aspects of the hydrologic balance which are to be protected. To ensure that the regulatory authority is provided with sufficient information to make the findings required under 510(b)(5), and to afford the protection required by Section 515(b)(10) of the Act, the Office is proposing Section 785.19.

Special environmental protection standards for protection of alluvial valley floors are proposed to implement Sections 510(b)(5) and 515(b)(10) of the Act at Part 822 of Subchapter K. Finally, definitions specifically applicable to mining near alluvial valley floors are being proposed at Part 701. The reader should thus consider Section 785.19 together with Section 786.17 and Parts 701 and 822.

(2) Technical literature used in the development of Section 785.19 includes the same technical literature as is cited in the Preamble to Section 701.5, 786.17 and Part 822, and also includes:

(a) Hardaway, J. E., Kimball, D. B., Lindsay, S. F., Schmidt, J., Erickson, L., March 1977. "Subirrigated Alluvial Valley Floors: A Reconaissance of Their Properties and Occurrence on Coal Resource Lands in the Interior Western United States." U.S. EPA, Region VIII, Denver, Colo. in *Papers Presented Before the Fifth Symposium on Surface Mining and Reclamation,* NCA/BCR Coal Conference, pp. 61-135.

(b) Malde, H. E., and Boyles, J. M., 1976. "Maps of Alluvial Valley Floors and Strippable Coal in 42 7½-minute Quadrangles, Big Horn, Rosebud, and Powder River Counties, Southeastern Montana," U.S.G.S. Open File Report 76-162.

(c) Office of Surface Mining, 1978, Guidance Document: "Technical Identification and Study of Alluvial Valley Floors,"

(d) Schmidt, J., 1977, "Alluvial Valley Floors in East Central Montana and their Relation to Strippable Coal Reserves; Reconnaissance Report, U.S. EPA, Region VII, in Cooperation with the State of Montana."

(e) National Academy of Sciences, *Rehabilitation Potential of Western Coal Lands* National Academy of Sciences, A Study for the Energy Policy Project, Washington, 1974.

(f) Cheyenne: *Hydrology of the Upper Cheyenne River Basin* Sediment Sources and Drainage-Basin Characteristics, Geological Survey Water Survey Water Supply Paper 1531, Washington, 1961.

(g) Hardaway, J., Meeting with State and Federal Regulatory Staff regarding technical finance paper on Identification and Study of Alluvial Valley Floors, U.S.E.P.A., August 28, 1978.

(2) Section 785.19 as proposed, would provide for a two-tiered approach to the making of permit applications in areas west of the 100th meridian which are located within a valley holding a stream or within two miles of any stream. First, the applicant would be required to conduct a pre-application reconnaissance inspection in these areas holding a stream or within two miles of a stream, to determine the absence or likely presence of an alluvial valley floor in the vicinity of a proposed mine plan area. The two mile limit would be based on the results of hydrogeologic investigation indicating that groundwater in alluvial valley floor areas has been affected by coal mining at distances of up to two miles (Reference c). The two mile limit is based upon a review of data available to the Office. (Reference (c)). The Office will, however, consider other relevant data that may be submitted to it during the comment period and establish the distance limit for the pre-application inspection appropriately in the final rules. The detailed technical basis for the items which would have to be included within the pre-application investigation under Sections 785.19(c)(1)(i)-(vii) are explained in Reference (c).

Under Section 785.19(c)(2), the regulatory authority would be required to make specific findings before determining that any portion of an alluvial valley floor or stream subject to the pre-application requirements may be excluded from further consideration in the full permit application process. The criteria for those findings are explained in Reference (c). It is expected that the regulatory authority would make these findings prior to receipt of a complete application for a permit for the area involved.

(3) If the results of the pre-application investigation were to indicate that

a valley floor is located within the two-mile range, then the applicant would be required under paragraph (d) of Section 785.19 to develop detailed information for inclusion in the permit application. The basis for the requirements of paragraph (d) are explained at reference (c) and (g).

(4) The data requirements set forth in Section 785.19 are believed to be representative of standard geologic, hydrologic, biologic, and land-use studies necessary to establish characteristics which support the essential hydrologic functions of alluvial valley floors, and determine the effect of the proposed operation on agricultural activities conducted on or adjacent to the proposed mine plan area. As proposed, these requirements would allow the regulatory authority the discretion to provide more detailed guidance regarding the quantity of data to be required.

§ 785.20 Augering operations.

Authority for this section in Sections 102; 201; 501(b); 503; 504; 507(b); 508(a); 510(b); and 515(b) of the Act. Under Section 515(b)(9) of the Act, specific environmental protection performance standards are provided for the permanent regulatory program for surface coal mining and reclamation operations involving augering operations. Those performance standards are being proposed for implementation to ensure that the regulatory authority is provided with sufficient information in permit applications under regulatory programs to determine whether operations proposing to utilize augering will be conducted in compliance with Part 819, Section 780.20 is being proposed.

§ 785.21 Coal processing plants and support facilities not within the permit area for a specific mine.

Authority for this section is Section 102; 201; 501(b); 503; 504; 506; 507(b); 508(a); 510(b); 515; 516 and 701 of the Act. Under Section 701(28)(B) of the Act certain coal processing plants and related support facilities not located within the permit area for a specific mine, but ". . . incident" to the operation of coal mines are defined to be "surface coal mining operations." Under Section 506(a) of the Act, all of those operations must obtain permits under regulatory programs, to operate on and after eight months from approval of those programs. Under Section 515 of the Act, environmental protection performance standards are applicable to those operations. Section 785.21 is being proposed to implement the Act's permit requirements for these operations and to ensure that they will be conducted in compliance with the special environmental protection performance standards being proposed for those operations at Part 827 of Subchapter K. The reader should consider Section 785.21 together with Part 827 and the provisions of Part 701, where the specific extent to which these operations will be covered under the Act are being proposed by appropriate definition.

§ 785.22 In situ activities.

Authority for this section is Sections 102; 201; 501(b); 503(a); 504; 506(a); 507(b); 508(a); 510(b); 515; 516; 517 and 701 of the Act. Under Section 701(28)(A) of the Act, "in situ" mining of coal is deemed to constitute surface coal mining operations and, under Section 560(a) of the Act, can only be operated under regulatory programs pursuant to permits. Under Section 515 of the Act, environmental protection performance standards are applicable to those operations. Section 785.22 is being proposed to implement the Act's permit requirements for these operations and to ensure that they will be conducted in compliance with the special environmental protection performance standards being proposed for those operations at Part 828 of Subchapter K. The reader should consider Section 785.22 together with Part 828.

PART 786—TERMS AND CONDITIONS OF PERMITS AND CRITERIA FOR APPROVAL OR DENIAL OF PERMITS

§ 786.1 Scope; 786.2—Objectives; and 786.4—Responsibility.

Authority for these sections are Sections 102, 201(c); 501(b); 503; 504; 505; 506; 507; 508; 509; 510; 515; 516; 517; and 522(a), (e)(3), (5) of the Act. Part 786 is intended to provide the minimum requirements for regulatory program provisions for permit terms, permit conditions and the substantive criteria to be used by the regulatory authority in deciding whether to issue a permit.

§ 786.11 Permit Terms.

Authority for this section is found generally in Sections 102; 201(c); 501(b); 503(a); 505, and 506 of the Act. This Section provides minimum requirements for permit terms under State programs.

All permits, in general, would be limited to a period not to exceed five years as provided in Section 506(b) of the Act. However, the States would be free to provide for more restrictive permit periods under State programs because the Act preserves from preemption more stringent requirements of State law. See Section 505 of the Act.

One exception would be proposed from the standard five-year term for permits. This is based on the proviso clause of Section 506(b) of the Act and is proposed at subsection 786.11(a). Longer permit terms may be granted under this section, if it is necessary to allow the operator to finance the purchase of equipment to open the mine.

The Office has considered whether an additional exemption from the standard five-year permit term should be allowed for underground mining activities. Upon examination of this issue, it has been tentatively concluded that the Office has no legal authority to allow for such an exemption. Although Subsection 516(d) of the Act authorizes the Office to "modify" the general provision of the Act relating to "permit *application* requirements, (and) permit approval or denial *procedures*" (emphasis supplied), the Office does not believe this extends to allow for modifications of the Act's permit *term* provisions. Permit *term* provisions are believed to be substantive criteria and "procedural" or "application" requirements covered by Subsection 516(d) of the Act.

Under Subsection 786.11(b), a permit would terminate if mining has not commenced within three years after issuance. The regulatory authority could extend the time period, if the opening of the operation were delayed by conditions beyond the control of the operator. Notice of such extensions are to be made to the public. For certain synthetic fuel facilities or major electric generating plants, surface coal mining operations would be deemed to have started at the time of the construction of those facilities. These provisions are required by Section 506(c) of the Act.

Subsection 786.11(c) is proposed to make it clear that permits are subject, during their stated terms to enforcement actions authorized under the Act. The authority for these actions are at Sections 504(d), (f); 511(c); 515(b)(16), (c), (e); 516(c); 517; 518; 519; and 521(a), (b), (d); of the Act.

§ 786.12 Conditions of Permits: General and Right of Entry.

Authority for this section is found at Sections 102; 201; 501(b); 503(a); 504; 506(a); 507; 508; 509; 510; 515; 516; and 517 of the Act. So that all requirements of the Act, this chapter, and regulatory programs will be complied with by persons operating under permits issued by regulatory authorities, Section 776.12 is proposed to require that the regulatory authority place specific conditions in all permits.

Subsection 786.12(a) is proposed to insure that mining operations are conducted according to the representations made to the regulatory authority by way of the materials submitted in the application for the permit, except to the extent that the regulatory authority has otherwise directed in the

permit. This provision is necessary to insure that the regulatory authority's determination that reclamation will be feasible, based upon the materials submitted in a permit application, is not undermined by deviations from representations made in the application during the actual conduct of mining and reclamation operations.

Subsection 786.12(b) is proposed primarily to implement the provisions of Section 517 of the act, requiring that authorized representatives of both the Secretary and the State regulatory authority be provided access to the areas covered by the permit or where records required to be kept by the permit are located, without delay or the need for a search warrant. The provisions of this paragraph are appropriately limited to require that such entries be allowed: (a) Where State or Federal inspectors present "appropriate credentials" and (b) that the entry be for certain specified purposes listed in subparagraphs (1) and (2) of this paragraph.

The Office has considered the question of whether requiring warrantless entries by State and Federal inspectors of permit operations would contravene the Fourth Amendment to the United States Constitution. The Office has concluded, based upon a review of the Act's legislative history and relevant case law, that such entries are lawful. *Surface Mining Regulation Litigation*, F. Supp. ——— (D.D.C., August 24, 1978) (Mem. Op. at 21-24). The Office has also proposed that, for the purposes of the right-of-entry permit condition, the offices' fee collection inspectors be deemed to be "authorized representatives of the Secretary," to allow for the Office to fulfill its responsibilities under Sections 102(h), 201(c); 401; 402; and 403 of the Act, by collection of the fees due under Section 402.

Subsection 786.12(c) is proposed to insure that operations conducted under permits are limited to those operations which were specifically disclosed on maps submitted to the regulatory authority as part of the permit application, under either Part 779-780 for surface mining activities or under Part 782-783 for underground mining activities. This requirement is important for two reasons. First, it is only with respect to those specific lands authorized for mining under a permit that the regulatory authority will have determined that reclamation of the area to be mined will be feasible, within the term of that permit, as required by the Act. Second, under Sections 506(d) and 511(a) of the Act, mining activities outside the boundary of the lands indicated on maps submitted in the permit applications must be made the subject of a new permit application.

§ 786.13 Conditions of Permits: Environment, Public Health and Safety.

This section is proposed to require permits issued by regulatory authorities to be specifically conditioned for the protection of the environment and public health and safety. Authority for this provision is Sections 102; 201; 501(b); 503; 504; 510; 515; 516; and 517 of the Act.

Subsection 786.13(a) would require permittees to take certain actions in the event of noncompliance with any term or condition of the permit, in order to minimize environmental harms.

Under Subsection 786.13(b), permits must be conditioned to insure adequate disposal of solids sludge, filter backwash or other pollutants removed during the course of use of water pollution or air pollution control facilities connected with the permitted surface coal mining and reclamation operations. This provision is based upon a similar provision specified in permits issued pursuant to the Clean Water Act, 33 U.S.C. 1251 *et seq.*, for the National Pollution Discharge Elimination System Permit Program. See 40 CFR Parts 124-125.

Under Subsection 786.13(c), the regulatory authority would be required to provide for any other conditions in the permit which will be needed to further the term and conditions of the permit, the Act, the requirements of this chapter and the applicable regulatory program. This provision is proposed to insure that the regulatory authority conditions permits to account for site-specific factors requiring special attention during the conduct of the permitted operations.

Examples of such conditions would be:

1. Specific effluent limitations on pollutants in addition to, or more stringent than, those listed in the General Effluent Limitations of the Environmental Protection Performance Standards at Sections 816.41 and 817.41;

2. Alternative conditions imposed on a permittee in place of general provisions of the performance standards of subchapter K which may be waived by variances granted for certain special categories of mining under Sections 785.11, 785.12, 785.13, 785.15, 785.16, and 785.18 of this subchapter;

3. Provisions to be incorporated in permits as the result of modifications made to the permit under Part 790 of this subchapter;

4. Conditions under which the regulatory authority may authorize alternative means of achieving a performance standard, where such alternative means are specifically authorized under the provisions of Subchapter K.

§ 786.15 Criteria for Permit Approval or Denial.

Authority for this section is Sections 102(b), (c), (d), (e); 201(c); 501(b); 503(a); 504; 505; 509(a), (b), (c); 510(a), (b), (c); 515(a), (b); 516(a), (b), (d); 517; and 522(a), (e), (1), (3), (4), (5) of the Act. This section would provide the substantive criteria by which a regulatory authority would approve or deny an application for a new or revised permit. This section is proposed principally to implement the requirements of Sections 510(b), (c) and 522(e) of the Act, under which surface coal mining and reclamation operations are to be authorized only under certain limited conditions. The general requirements in the main text of section 786.15 are derived from the text of Section 510(b) of the Act. The most important principle would be that the burden of proof to show entitlement to a permit would rest with the applicant, as expressly provided for in Section 510(b) of the Act.

Subsection 786.15(a) is based on Section 510(b)(1) of the Act and is proposed to insure that all requirements applicable law governing the issuance of a permit have been complied with by the applicant and the regulatory authority. Subsection 786.15(b) is based on Section 510(b)(2) of the Act.

Under Subsection 786.15(c), the requirement of Section 510(b)(3) of the Act would be implemented. First, the regulatory authority would be required to have completed an assessment of the probable cumulative impacts of all anticipated coal mining in the area around the mine plan area on the hydrologic balance of the "general area" around the particular permit area. Second, the regulatory authority would have to determine that the proposed operations under that application have been designed to prevent material damage to the hydrologic balance outside the permit area.

With respect to the general assessment of all anticipated coal mining in the area, the regulatory authority is to utilize the information provided for that task in the application under Section 780.21(c) or 784.13(c) of this Subchapter. This information may, of course, be largely derived from data collection and analysis efforts of State and Federal agencies under Section 507(b)(11) of the Act. The Office has considered how this data is to be assessed and made available to State regulatory authority. A data collection and analysis coordination project initiated by the U.S. Geological Survey is currently underway to provide for these needs and is expected to be a functioning system for the use of regulatory authorities by the time that State programs are implemented in late 1979.

Regarding the term "hydrologic balance," the same definition given that term in the initial regulatory program at Section 710.5 of this Chapter would be continued under proposed Section 701.5. However, the Office will consider whether additional elements should be added to that definition in the rules, especially for the purposes of the regulatory authority's determination under Subsection 786.15(c). In particular, the Office will consider whether the following factors should be made specific elements of the definition of "hydrologic balance" and, accordingly, solicits comments on these factors:

(1) General and numerical water quality standards adopted under the provisions of Section 303 of the Clean Water Act, as amended 33 U.S.C. section 1313;

(2) Additional quantitative standards expressing the relationship between the chemical, physical, and bacteriological properties of water and the impact of varying degrees of those properties on the public uses of those waters and fish and wildlife using those waters;

(3) Quantitative standards limiting the extent to which the quantities of water in surface and ground systems may be allowed to be disturbed in a given area by coal mining.

Under Sections 522(a) and (d) of the Act, Congress has required that State programs incorporate processes for designation of lands as unsuitable for all or certain types of coal mining. Under Section 522(e), Congress itself specifically prohibited coal mining in several instances. To insure that these provisions are implemented in the permits processes under regulatory programs, of Subsections 786.15 (d) and (e) are proposed. Under these subsections, the regulatory authority must insure that permits are not issued for areas prohibited from being mined under Section 522 of the Act and the regulations being proposed to implement this section at Subchapter F.

Under Section 510 (b)(4) of the Act, Congress specified that no permits are to be issued where either: (i) An area has been designated unsuitable for the type of coal mining involved in an application under a designation process conducted pursuant to Section 522(a), (b), and (d) of the Act, or (ii) where a proceeding for such a designation is already pending.

Paragraphs 786.15(d)(1) and (2) are proposed to implement those provisions of Section 510(b)(4) of the Act. Appropriate allowance has been made for the exemption from the requirement of Section 510(b)(4) for investment in "substantial legal and financial commitments prior to January 4, 1977." The substantive criteria by which a determination of whether such commitments have been made by the applicants are provided for in Subchapter F.

Under Section 522(e)(1), certain important Congressionally-designated lands are prohibited from coal mining. Under Section 522(e)(5), mining is prohibited within specified distances of certain designated structures. Regulations are being proposed to implement those provisions of the Act at Section 761.11(a), (f), (g), of Subchapter F. To account for these prohibitions on mining in regulatory program permit processes, subparagraph (d)(3) of Section 785.16 is being proposed.

Under Section 522(e)(5) of the Act, mining within 300 feet of an occupied dwelling is prohibited, subject to exception by written consent of the owner of the dwelling. Criteria for determining whether that exception should be approved in a particular case are being proposed at Subsections 761.11(e) and 761.12(e) of Subchapter F. To account for this prohibition, subject to an approved exception, in regulatory program permit processes, Paragraph 785.16(d)(5) is proposed.

Under Section 522(e)(4) of the Act, mining which would adversely affect a public park or historical place is prohibited, unless jointly approved by the regulatory authority and agency with jurisdiction to manage the park or historic place. Criteria for determining whether that approval should be granted in a particular case are being proposed at Subsection 761.12(b) of Subchapter F. To account for this prohibition, subject to an approved exception, in regulatory program permit processes, Subsection 786.15(e) is being proposed.

Under Section 510(b)(c) of the Act, the regulatory authority is prohibited from issuing a permit for surface mining activities, where the private mineral estate has been severed from the private surface estate, unless the applicant has submitted appropriate documentation to establish its right to use the surface mining method on the lands involved. Subsection 785.16(f) is proposed to implement this provision through adoption, by cross-reference, of the requirements regarding information required to be contained on applications addressing this issue and specified in Subsections 778.15(b) and 782.15(b) of this Subchapter.

Under Section 510(c) of the Act, the regulatory authority is prohibited from issuing a permit until the applicant has demonstrated that any violations of the Act or other State or federal air, water or other environmental laws, caused by the applicant at another mining operation, have been corrected or are in the process of correction to the satisfaction of the government agency with jurisdiction over the violation. Subsection 786.15(g) is proposed to implement that provision of the Act in the context of the regulatory authority's decision on issuance or denial of a permit.

Under Section 510(c) of the Act, the regulatory authority is prohibited from issuing a permit to an applicant whose pattern of prior willful violations of the Act has resulted in irreparable damage to the environment, so as to indicate an intent not to comply with the provisions of the Act in the future. Subsection 785.16(h) is proposed to implement this provision of the Act. Provision for conducting the hearing required prior to making a determination under Subsection 785.16(h) not to issue a permit is being proposed at Subsection 788.12(d) of this Subchapter.

The mining of contiguous areas under different permits, either by the same or different permittee, can cause special problems if not adequately accounted for. As an example, one permittee could be allowed to divert a stream running through two contiguous permit areas resulting in a discharge, after diversion, into the middle of the second permittee's surface operation area. To insure that such problems are avoided, Subsection 785.16(i) is proposed to require the regulatory authority to determine that operation under a particular permit will not be inconsistent with other operations to be performed in adjacent areas.

Under Section 509(a) of the Act, a permit applicant is required to file a performance bond or other equivalent guarantee with the regulatory authority prior to the issuance of the permit. Regulation implementing Section 509 are being proposed at Subchapter J. To implement the particular provision of Section 509(a) on the posting of the bond prior to issuance of a permit, Subsection 786.15(j) is being proposed.

Under Section 510(d)(1) of the Act, certain specific findings must be made by the regulatory authority before issuing a permit for mining on prime farm land. Special permits regulations are being proposed for mining on prime farm lands under Section 785.17 of this Subchapter. To insure that the regulatory authority makes the specific findings for issuance of a permit that are required under Section 510(c) of the Act and which would be required under Section 785.17, Subsection 786.15(k) is being proposed.

Under Sections 512(b) and 515(b)(2) of the Act, the regulatory authority must find, prior to issuing a permit, that reclamation of the mine plan area will be feasible, including appropriate provision for the postmining land use. Environmental protection performance standards for protection of the postmining land use are being proposed at Sections 816.124 and 817.133

of Subchapter K, for surface mining activities and underground mining activities, respectively. To insure that the regulatory authority makes the specific findings for issuance of a permit that are needed under Section 515(b)(2) of the Act and which would be required under Sections 816.124 or 817.133, Subsection 786.15(l) is being proposed.

Under Parts 816 and 817 of Subchapter K, administration of the environmental protection performance standards system would require numerous prior approvals of the regulatory authority before the conduct of operations. To insure that those approvals are made under regulatory programs, Subsection 786.15(m) is being proposed.

The Office has received comments concerning whether additional criteria should be established to determine the operator's ability to reclaim a mine plan area. The Office invites additional comment on this alternative to address whether the Office should require a showing that the applicant has the necessary machinery and financial capability to reclaim the land.

§ 786.17 Criteria for permit approval or denial: Alluvial valley floors.

1. Authority for this section is Sections 102; 201; 501(b); 503; 504; 506(a); 507(b); 508(a); 510(b); 515(b); and 517 of the Act. Under Section 510(b)(5) of the Act, the regulatory authority is required to make certain specific findings prior to the issuance of a permit authorizing the conduct of surface coal mining and reclamation operations on or adjacent to alluvial valley floors located west of the 100th meridian of the country. Under Section 515(b)(10) of the Act, environmental protection performance standards are provided for the protection of the hydrologic balance, including of alluvial valley floors. Under Section 510(b)(3) of the Act, the regulatory authority is required, prior to the issuance of a permit, to insure that proposed operations have been designed to prevent material damage to the hydrologic balance.

Under Part 822 of Subchapter K, the Office would establish special environmental protection performance standards applicable to surface coal mining and reclamation operations on or adjacent to alluvial valley floors. To implement these provisions of the Act and to insure that operations will be conducted in full compliance with the provisions of Part 822, Section 786.17 is being proposed to provide the substantive criteria by which a regulatory authority is to decide whether to approve of a permit for mining on or adjacent to alluvial valley floors west of the 100th meridian.

Permit application information requirements for these operations are being proposed at Section 785.19 of this Subchapter. The reader of Section 786.17 should, therefore, carefully consider that section together with Section 785.18, Part 822 and certain special definitions applicable to alluvial valley floors being proposed at Section 701.5 of this Chapter.

The substantive criteria by which the regulatory authority is to determine whether a permit can be issued for mining on or adjacent to alluvial valley floors west of the 100th meridian are being proposed in Subsection 786.17(a). Three specific criteria are proposed. The first and second criteria are based upon the language of Sections 510(b)(5)(A) and (B) of the Act. The third criteria, insuring that the proposed operations will be conducted in accordance with the performance standards of Part 822 applicable to alluvial valley floors, is proposed to insure that the goal of feasible reclamation in Section 102 of the Act is implemented with respect to mining on or adjacent to alluvial valley floors.

Subsection 786.17(b) provides for two exceptions, under which applications for permits could be approved by the regulatory authority without regard to the substantive criteria specified at Subsection 786.17(a). These exceptions are specifically authorized under the proviso clause to Section 510(b)(5) of the Act.

Technical literature used to develop proposed Section 786.17 includes the literature cited in the preamble to Section 785.19 and Part 822 and, in addition, the following:

(1) Federal Water Pollution Control Administration, *Water Quality Criteria* (1968);

(2) Moss and Hoffman, Crop-Salt Tolerance-Current Assessment, *Journal of Irrigation and Drainage Division* of *The American Society* of *Civil Engineers* (June, 1977).

Subsection 786.17(c) is being proposed to provide specific guidelines for the use of the regulatory authority in determining the extent of acceptable impact of proposed surface coal mining and reclamation operations on farming in alluvial valley floor situations. As proposed, OSM would establish as a measure of significant impact on farming, a value of 10 percent of decrease in a farm's production capacity for harvestable crops, a 10 percent decrease of the farm's water supply or a combination of these factors which would result in a 10 percent decrease in typical annual productivity.

Specific guidelines for the use of the regulatory authority in determining whether the impact of the proposed operations on the quality or quantity of water in surface or underground water systems supplying alluvial valley floors are being proposed in Subsection 786.17(d). Under that subsection, material damage to the quantity and quality of water supplying alluvial valley floors would be defined as meaning changes in ground water or surface water which are projected to affect adversely the utility and production of sub-irrigated or flood-irrigated agricultural lands. OSM believes it would be preferable to use projected changes in water quality and quantity rather than changes in vegetation as measures of such changes, because projected damage to vegetation can be forecast only by implementing very long-term measurement programs. In contrast, changes in water quantity and quality may be predicted with the use of hydrologic models. OSM is recommending, that the following criteria be used, unless more stringent and site-specific criteria are developed by the regulatory authority under a particular regulatory program:

(1) Increases in total dissolved solids in excess of threshold values projected to result in crop-yield deceases (but in no case would applicable water quality standards be violated);

(2) Increases in the average depth of water saturated zones during the growing season located within the root zones of the alluvial valley floor that would reduce the amount of subirrigable land compared to premining conditions;

(3) Decreases in surface water flows that reduce the size of the alluvial valley floor that is irrigable; and

(4) Changes in surface or ground water systems that are detrimental to agricultural activities through flooding or water logging.

Alternatives to these criteria that were considered in the development of this proposal included:

(1) Merely repeating the language of the Act at Section 510(b)(5) and providing no additional guidance.

(2) Using values of 10 to 20 percent of change in total dissolved solid content of water supplied to alluvial valley floors to determine whether material damage to water and subsequent damage to vegetation was sufficient to deny a permit.

(3) Measuring increases to the saturated zones within the upper six feet of those zones only,

(4) Requiring further definitions by the regulatory authority, and

(5) Allowing no damage to water and agriculturally important vegetation of alluvial valley floors.

The basis for selection of the proposed regulations, as opposed to the above alternatives, was the legislative history of the Act, technical literature cited above and in the preamble to Part 822 and the OSM's understanding of the difficulty of comparing environmental data in a statisticaly signifi-

cant manner. The first alternative has been tentatively rejected because of both the Office's understanding that Congress expected it to provide more detailed guidance in implementing the Act through regulations and the existence of certain common criteria used by hydrologists, geologists and land-use planners to determine the impact of industrial activity or agricultural production. The second alternative has not been adopted because of the lack of available data for streams not affected by mining, from which it would be possible to ascertain whether natural changes in total dissolved solids content could be as significant as the percentage values identified in the second alternative. Instead, it is being proposed that industrial damage to water quality be measured according to changes in total dissolved solids in absolute forms, based on data available to the regulatory authority which shows the levels of total dissolved solids that cause crop yields to begin to decline.

The third alternative considered, an assessment of increases for saturated zones within the upper six feet of these zones, only has been tentatively rejected because crops commonly grown in alluvial valley floors, such as alfalfa, have root zones that may be affected at levels deeper than six feet. Alternative four has been rejected as the sole method of implementing Section 510(b)(5) of the Act by regulation; however, discretion is being left to the regulatory authority to determine if more specific criteria should be developed. The fifth alternative of allowing for no changes in water quality, quantity or agricultural productivity under any circumstances has been rejected because of the need to account for normal visibility in environmental data. Instead, quantitative limits, where proposed, are believed to represent variations slightly outside the range of normal fluctuations, as observed during field inspections and measurements of experts detailed to the Office.

PART 787—PUBLIC PARTICIPATION IN PERMIT REVIEW PROCESS

§ 787.1 Scope; § 787.2 Objectives; § 787.4 Responsibility.

Authority for these sections is Sections 102; 201(c); 501(b); 503; 504; 507; 508; 510 (a), (b); 513; 514; 516(a); and 522(e)(4) of the Act. One of Congress' central purposes in adoption of the Act was to insure adequate provision for participation by the public in regulatory programs for surface coal mining and reclamation operations. Section 102(i) of the Act. For the permit process, Congress provided certain key elements for public participation. Part 787 is proposed to implement this congressional purpose and these provisions of the Act.

§ 787.11 Public notices of filing of permit applications.

1. Authority for this section is generally Sections 102; 201(c); 501(b); 503; 504; 510 (a), (b); 513(a); and 517 of the Act. This section would govern notices of the filing of applications required to be made to the public by both applicants and the regulatory authority.

2. Under Subsection 787.11(a), the applicant would be required to run an advertisement of its application in a local newspaper, once a week for four weeks, commencing with the filing of the application with the regulatory authority. The advertisement would have to contain the name and address of the applicant, a map showing the location and boundaries of the proposed operation and other information, the general area around the proposed permit area, the location of the filing with an appropriate public office of a complete copy of the application, and the place to which written objections, comments and requests for informal conferences would be sent. The newspaper advertisement is required by Sections 507(b) and 513(a) of the Act.

Maps in newspaper advertisement. The Office is proposing that a map with certain specified detailed information be included in the newspaper advertisement, to implement the requirement of Section 513(a) of the Act that this notice contain the "precise location and boundaries of the land to be affected." A map, rather than an extended verbal discussion of these items, is proposed for the use of the lay public who may not easily understand the technical, legal, and engineering terminology that the textual description of the location and boundary of a parcel of land generally involves. See H.R. Rep. No. 93-1522, 93rd. Cong, 2d. Sess. at 76, 81 (1974). The type of map called for in the proposed regulation is already required by West Virginia state law (Sections 8, 9, Article 6, Ch. 20, *W. Va. Code*) for newspaper notices of the filing of surface mining permit application with the West Virginia Department of Natural Resources. The Office recognizes that requiring inclusion of a map in the newspaper advertisement may involve additional expense for permit applicants than if no map were required. However, it is believed that this will not be significant on a national basis and would be outweighed by the benefit of better notice to the public. (See Memorandum, B. J. Gregg, USDOI to D. Buente, USDOI, Sept. 1, 1978).

3. Under Section 522(e)(4) of the Act, mining is prohibited within one-hundred feet of the outside right-of-way of a public road, subject to two exceptions. Approval of those exceptions may be granted by the regulatory authority only after notice and opportunity for a public hearing. To provide for a determination of whether an exception should be granted, it is proposed, under Paragraph 787.11(a)(5), that the newspaper advertisement of filing of a permit application explain the basis for the request of the exception.

4. Under Subsection 787.11 (b) and (c), the regulatory authority is to issue written notifications of the receipt of permit applications to various other concerned Federal, State and local governmental agencies, public utilities operations, the Regional Director of the Office and other interested persons for opportunity to submit comments to the regulatory authority. This notification requirement is proposed to implement Sections 102(i), 507(e), 513(a), and 513(b) of the Act. Some States commended past notice of the filing of the application should not be required to be given to other State or Federal agencies. However, Section 513 of the Act requires that this notice be given by the regulatory authority.

5. The applicant is also required by Section 507(e) of the Act, to file a copy of the application at the courthouse of the county or other available public office in the county where the mining is proposed. Appropriate exclusion from this public filing for information entitled to confidential treatment under Sections 507(b)(17), 507(e), and 508(a)(12) of the Act would be provided.

Several comments were received regarding the time limit for filing of a copy of the application with a public office. Some States and industry commenters suggested that this be required only after the regulatory authority makes an initial determination that the application is complete, so that the public does not waste time reviewing incomplete applications. Some public interest commenters suggested that filing of the application be required as early as possible, recommending a point as the same time as the first date of required newspaper advertisement. These commenters suggested that the public be allowed as much time as possible to review permit applications, even if incomplete.

The Office has tentatively decided not to change the rule in light of these comments, because it believes that requiring filing of the application by the last date of newspaper publication strikes a reasonable balance between the public's desire to be afforded as long a comment period as possible and the States' desire to avoid the review of comments on incomplete application which are mooted by subsequent

submissions of the applicant. However, further comments on this matter are solicited.

§ 787.12 Opportunity for submission of written comments on permit applications.

Authority for this section is Sections 102; 201(c); 501(b); 503(a); 504; 510(a), (b); and 513(a) of the Act. All persons to whom notice has been given, either through newspaper advertisement or written notification, are authorized by the Act to file comments concerning the application with the regulatory authority. Section 787.12 is proposed to implement those provisions of the Act. All comments are to be added to the copy of the application open for public inspection, immediately upon receipt by the regulatory authority, so that all interested members of the public can be made aware of issues raised regarding the permit application. As provided by Section 513(a) of the Act, the time limit and manner for submission of these comments would be left to the discretion of the regulatory authority so long as those requirements are reasonable.

Several industry commenters suggested that this section be modified to require that copies of comments be sent to the applicant. The Office agrees that applicants should be provided with opportunity to respond to comments and states further comment on how this can be best accomplished in the final rules.

§ 787.13 Right to file written objectives.

Authority for this section is Sections 102; 201(c); 501(b); 503; 504; 510 (a), (b); and 513(b) of the Act. Under Section 787.13, all interested parties would have the right to file written objections to the issuance of a permit within 30 days of the last publication date of the advertisement. Copies of the objections would be sent by the regulatory authority to the applicant and filed with the copy of the application placed in a public office under Subsection 787.11(d).

§ 787.14 Informal conferences.

Authority for this section is Subsections 102; 201(c); 501(b); 503; 504; 510 (a), (b); 513(b); 516(a); and 522(e)(4) of the Act.

1. Under Section 513(b) of the Act, provision is made for the regulatory authority to conduct an informal conference to determine whether a permit should be issued. Section 787.14 is proposed principally to implement that section of the Act. The procedures for initiating requests of the conference are proposed in Subsection 787.14(a) and are based upon Section 513(b) of the Act. In addition, under Subsection 787.14(b), the regulatory authority would be required to honor requests for a conference as provided for in Section 513(b) of the Act. As is indicated in Section 513(b) of the Act, the conference is to be held within "a reasonable time of the receipt of an objection and request," and no specific time limit would be fixed by the proposed regulation.

2. The location of the conference, public notice for pre-conference discovery procedures, and the purpose for the conference would be determined according to the provisions of proposed paragraphs 787.14(b) (1, 2, 3, and 4). These provisions are based upon Section 513(b) of the Act and its legislative history. The legislative history of the Act indicates that Congress intended that the informal conference not be conducted according to the rules for a formal adjudicatory hearing. Accordingly, Paragraph 787.14(b)(5) is proposed to indicate that the requirements of the Administrative Procedure Act regarding formal adjudicatory hearings are not to be applied to determine the conduct of the informal conference. Additional provisions in Section 787.14 would authorize the regulatory authority to conduct the conference, receive relevant information and maintain a record until release of the applicant's performance bond, if the permit is issued, as provided in Section 513(b) of the Act.

3. Some commenters proposed that issues to be considered at the conference not be limited to those raised in the comments, objections, and requests for informal conferences received by the regulatory authority. However, the regulatory authority must have some method to prepare for the conference and the applicant needs to be adequately informed of what issues it will need to respond to at the conference. Therefore, the Office is soliciting further comment on this question.

4. Subsection 787.14(d) is proposed to implement Section 522(e)(4) of the Act, whereby exceptions to the general prohibition against conducting mining operations within 100 feet of the outside right-of-way of a public road may be authorized by the regulatory authority, subject to opportunity for a public hearing. The regulations providing for the substantive criteria by which such exceptions are to be granted proposed in Subsection 761.12(d) of Subchapter F. Subsection 787.14(d) would allow the regulatory authority to utilize an informal conference for the purposes of satisfying the requirement of a hearing under Subsection 761.12(d).

5. The Office has considered whether minimum requirements regarding the informal conference should be proposed, in addition to those formally identified in Section 787.14. Among such alternatives are providing for additional procedural rules governing the conduct of the hearing and providing for time limits for the actual conduct of the hearing. The Office has tentatively concluded not to propose such additional requirements, based upon its reading of the legislative history of Section 513(b) of the Act as indicating Congressional intent that, aside from the minimum requirements provided by the Act, the conduct of the informal conference was to be left to regulatory discretion, so as to insure that the issues to be considered at such hearings can be most expeditiously and practically resolved.

6. Some commenters suggested that this section be modified to specifically provide that any person may be a "party" to the conference, whether or not that person also has submitted comments, objections, or requests for a conference to the regulatory authority. The Office does not interpret the existing text of this section as precluding the regulatory authority from allowing those persons to become parties and, therefore, believes that no additional language is needed.

§ 787.15 Public availability of information in permit application on file with the regulatory authority.

Authority for this section is Sections 102 (b), (c), (d), (e), (i); 201(c); 501(b); 503(a); 504; 507(b) (17); 507(e); 508(a)(12), (b); 510 (a), (b); and 517 of the Act.

Under Section 517(f) of the Act, a general rule is established for information obtained by the regulatory authority under the Act. This rule is that all of that information is ordinarily to be made reasonably available for public inspection and copying, in keeping with the purposes of the Act in Section 102(i). Further, Sections 507(b)(17) and (e) specifically provide for making publically available information in permit applications filed with the regulatory authority. Therefore, under Sections 102, 507, and 517, all information contained in applications for permits is to be generally made available to the public by the regulatory authority. Subsection 787.15(a) is proposed to implement this requirement.

The Act, however, does provide for certain exceptions to the type of information contained in permit applications that the regulatory authority is required to make available. These exceptions are provided for in Sections 507(b)(17) and 508(a)(12) and (b) of the Act. Paragraphs 787.15(a)(1) through (3) are proposed to implement these exceptions. As exclusions, these are to be interpreted narrowly.

Under Subsection 787.15(b), provision is proposed for adoption of administrative procedures to identify

and segregate, from non-protected information, that information which is entitled to protection under Paragraphs 785.15(a)(1)-(3).

PART 788—REGULATORY AUTHORITY REVIEW AND DECISIONS ON PERMIT APPLICATIONS

Part 788 is proposed to set forth the procedures that the regulatory authority is to follow after receipt of an application for a permit, to decide whether to grant or deny it and to notify interested parties of that decision.

§ 788.12 Review of Permit Application.

(1). Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 507; 508(a); 509; 510 (a), (b), (c); 513; 514(a), (b); and 522(e) of the Act. Under the Act, the regulatory authority is required to follow certain procedures for reviewing completed applications for permits. Section 788.12 is proposed to implement those provisions of the Act.

(2). Under Sections 510(a) and 514(a)-(b) of the Act, the regulatory authority is required, prior to granting or denying a permit, to review the permit application materials and the results of public input from required public participation procedures. Paragraph (a) of Section 788.12 is proposed to implement these requirements. Under Section 509(a) of the Act and the regulations being proposed to implement that provision, Subchapter J, the regulatory authority must insure that, prior to issuing a permit, the applicant has filed a satisfactory performance bond or other guarantee. Section 788.12(b) is proposed to implement those provisions during the process of final review of a permit application.

(3). Under Section 510(c) of the Act, the regulatory authority is required to review the application and other relevant information about the applicant, to ascertain whether the applicant is in violation of the Act or other State and Federal air and water environmental statutes. If the regulatory authority learns of the existence of a violation of these laws, as evidenced by issuance of written notification from the governmental agency with jurisdiction over the violation, or from other information, then the regulatory authority is precluded from issuing a permit, unless the applicant submits proof of correction of the violations. Paragraph (c) of Section 788.12 is proposed to insure that the regulatory authority implements these requirements of Section 510(c) of the Act.

(4). Under Section 510(c) of the Act, the regulatory authority is also directed not to issue a permit where the ". . . applicant, or the operator specified in the application, controls or has controlled mining operations with a demonstrated pattern of willful violation of the Act of such nature and duration with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act." This determination is, however, to be made only after opportunity for a hearing. To implement the requirement for this hearing, paragraph (d) of Section 788.12 is proposed to require that the regulatory authority offer opportunity for an adjudicatory hearing as would be provided for in particular regulations of the regulatory program.

(a) In proposing that this hearing be adjudicatory in nature, the Office has reviewed relevant case law. Based on this review, it has tentatively concluded that the individualized nature of the factual determination that will be involved in this circumstance are the types of determinations that the courts have held that due process requires an adjudicatory, as opposed to a legislative, hearing.

(b) The Office has also considered whether the other hearing provisions required under the Act in the permit process could be utilized to satisfy the requirement of a hearing under Section 510(c) of the Act. Based upon a review of the relevant provisions of the Act, the Office has tentatively concluded that these other hearing requirements would not satisfy the provisions of Section 510(c).

As to the informal conference provided for under Section 513(b) of the Act, that hearing would appear not to be applicable in the context of Section 510(c), because, by its own terms, that conference is "informal" and not the "adjudicatory" hearing which due process is thought to require for a Section 510(c) hearing. The hearing provision of Section 514(c) of the Act also appears to be inapplicable, because that is a hearing to be provided *after* the regulatory authority acts on a permit, whereas the hearing under Section 510(c) of the Act is to be afforded *prior* to such a decision.

(c) The Office has also considered whether minimum procedural requirements should be specified in Section 788.12(d), to govern the conduct of the adjudicatory hearing under Section 510(c) of the Act. Similar minimum requirements are proposed to be required for regulatory programs for hearings under Section 514(c) of the Act. *See* Part 789 of this Subchapter. The Office has not yet decided whether to specify such procedural requirements under 788.12(d) and specifically solicits comments on this matter.

§ 788.13 Permit approval or denial actions.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 507; 508(a); 509; 510(a), (b), (c); 514(a), (b); and 515 of the Act. Under Sections 510(a), (b), (c); 513(a), (b), and 514(a), (b) of the Act, the regulatory authority is required to reach a determination of whether to grant or deny a permit on the basis of a thorough review of a complete application and the results of public participation. Following that review, Sections 506(a), 510(a), and 514(a), (b) and (c) of the Act specify time limits and methods by which the regulatory authority is to decide whether to issue or deny a permit and make notification of that decision. Section 788.13 is proposed principally to implement those provisions.

1. Paragraph (a) of Section 788.13 would provide for a check-list of all general requirements that the regulatory authority must insure have been complied with, prior to deciding whether to issue or deny a permit according to the criteria of Section 786.15 and 786.17 of this Subchapter.

2. Paragraph (b) of Section 788.13 would provide the time limits in which the regulatory authority must act to formally grant or deny a permit after the receipt of an application. It is important to note that all of the time limits set forth in this paragraph would commence running only upon the regulatory authority's receipt of a complete application.

3. Under paragraph (b), two separate systems of time limits would be imposed on the regulatory authority. The first, at Section 788.13(b)(1), is to be applied under Sections 506(a) and 514(a) of the Act to those completed applications received by the regulatory authority at the early stages of implementation of the permanent regulatory program.

Under Section 502(d) of the Act and Section 771.19(b)(1) of this subchapter, those persons expecting to operate mines on or after eight months of approval of a regulatory program will be required to file permit applications within two months from the approval of the regulatory program. Under Section 506(a), the regulatory authority is to issue or deny a permit in response to those applications within the eight months period after approval of the program. However, a further time constraint is imposed by Section 514(a) of the Act, requiring the regulatory authority to act on any application within sixty days of the close of an informal conference held under Section 513(b).

As proposed, Section 788.13(b)(1) would implement the requirements of Sections 506(a) and 514(a), by requiring a decision on applications filed within the two months deadline of Section 502(d) of the Act and Section 771.19(b)(1) to be made within eight months of approval of the regulatory program, or within sixty days of the

close of an informal conference, whichever occurs earlier.

4. After the first stage of implementation of a regulatory program covered by section 788.13(b)(1), the Act provides for no particular fixed time constraint in which the regulatory authority is to act on an application, except where an informal conference has been held. In general, Section 514(b) of the Act requires that these actions be taken within a "reasonable time." However, where an informal conference has been held, then the regulatory authority is required to act within 60 days of the close of the conference. Section 788.13(b)(2) is proposed to implement these provisions of the Act. It is important to note that, as proposed, those applications filed after the two months deadline from approval of a regulatory program, as required by Section 502(d) of the Act and Section 771.19(b)(1) of this Subchapter, would be covered by the provisions of Section 788.13(b)(2).

The Office is concerned that the phrase "reasonable time" in this context be applied so as to insure that applications are given meaningful review and that adequate opportunity for full public participation is provided. Accordingly, the Office solicits comments on whether safeguards to insure that those ends are achieved should be provided in the final rules.

5. Under Section 510(c) of the Act, the regulatory authority is required to provide opportunity for a hearing prior to disapproving an application, because of the applicant's prior violations of the Act which show a present intent not to comply with the Act. As was explained in the preamble to Section 788.12(d), this hearing would have to be conducted separately from the informal conference procedure. Because a Section 510(c) hearing must, by the terms of that section, be conducted prior to the denial of a permit, the regulatory authority may be precluded for a substantial period of time from taking final action on the application involved, within the time constraints otherwise to be required under Section 788.13(b). As the Office interprets the Act, it is believed that Congress intended that those time constraints not preclude the conduct of a hearing required by Section 510(c) of the Act. Therefore, paragraph (b)(3) of Section 788.13 is proposed to provide for the tolling of the time limits otherwise required for a decision by the regulatory authority under Section 788.13(b).

7. Under Sections 514(a)-(c) of the Act, the regulatory authority is required to give notice of and reasons for its final decision in issuing or denying a permit. In addition, the Office will need to be advised of that decision and provided with a copy of the permit, in order to carry out its administrative, investigative, and enforcement responsibilities under sections 504, 517, 518 and 521 of the Act and Parts 733, 736, and Subchapter L of this Chapter. To implement the requirements of Section 514 and to enable the Office to perform those responsibilities, paragraph (d) of Section 788.13 is proposed.

8. Under Section 506(a) of the Act, the regulatory authority is required to give notice of the issuance of a permit to local governments in the area of the operation. Section 788.13(e) is proposed to implement that Section of the Act.

PART 789—ADMINISTRATIVE AND JUDICIAL REVIEW OF DECISIONS BY REGULATORY ON PERMIT APPLICATIONS

Sections 514 and 526 of the Act provide for opportunities for administrative adjudicatory and for judicial review of final decisions by the regulatory authority on applications for permits and of the regulatory authority's failure to act on applications within the times required by the Act. Part 789 is proposed to implement these provisions of the Act.

§ 789.11 Administrative review.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 510 (a), (b); 514 (c), (d), (e); and 515 of the Act.

1. Under Section 514(c) of the Act, a regulatory program must afford opportunity for an adjudicatory hearing to the applicant or any person whose interest is or may be adversely affected by a final decision of the regulatory authority to grant or deny a permit. The time limit to request such a hearing is specified under Section 514(c) to be within 30 days of notice to the applicant of the decision of the regulatory authority. Paragraph (a) of Section 789.11 is proposed to implement these provisions of the Act.

2. Under Sections 514 (c) and (e) of the Act, minimum rules of procedure and time limits for the conduct and completion of the adjudicatory hearing are specified. Paragraphs (c), (d), and (e) of Section 789.11 are proposed to implement those requirements. The Office is also considering whether additional minimum procedural requirements should be specified for these hearings. Among the matters which might be specified are minimum requirements for:

(i) *Discovery* including the taking of deposition and the use written interrogatories between the parties to the hearing;

(ii) *Intervention;*

(iii) *Rules of evidence;*

(iv) The filing of *motions* and post-hearing *briefs*, proposed *findings of fact and conclusions of law*; and

(v) *Re-consideration and re-hearing.*

Those additional minimum requirements might be modeled according to the similar requirements of the Administrative Procedures Act, 5 USC Sections 554–557, and/or the existing rules for practice and procedure before the Department's Office of Hearing and Appeals in proceedings under the Act, 43 C.F.R. Pt. 4. The Office specifically solicits comments on whether additional minimum requirements for adjudicatory hearings under this Part should be established in the final rules.

3. Under Section 514(d) of the Act, the hearing authority under a regulatory program is authorized to provide for temporary relief, when a hearing is requested under Section 514(e) of the Act. Relief is to be based upon specific findings of the existence of certain conditions. Section 789.11(c) is proposed to implement those provisions of the Act.

The conditions stated at subparagraphs (c)(1) to (3) of Section 789.11 are based on the express language of Section 514(d) of the Act. The fourth condition of paragraph (c)(4) is proposed to make it clear that temporary relief may not include the issuance of a permit, where the action of the regulatory appealed from was the denial, in whole or in part, of a permit.

This condition is proposed on several bases. First, the Office interprets the provisions of Section 102(b), (c), (d), and (e); 201(c); 507, 508 and 510 of the Act to state a general requirement that coal mining not be allowed to be conducted until the applicant has clearly and thoroughly demonstrated, through careful scrutiny by the regulatory authority, that reclamation of the area to be disturbed by the proposed operations will be feasible. The Office feels that only a full adjudicatory hearing on the merits, not merely a temporary relief hearing, can provide for the careful scrutiny needed before a decision is made to reverse a determination of the regulatory authority that reclamation will not be feasible. Second, general principles of administrative law provide that temporary relief is available only to restore the parties to the *status quo* prevailing prior to the governmental decision from which relief is sought, see., e.g., *Virginia Petroleum Jobbers Assoc. FPC* 259 F.2d 921 (DC Cir., 1958). In cases where a permit denial is involved, the *status quo* does not include authorization for surface coal mining and reclamations to proceed under a permit, so that the power to award temporary relief according to the general principles of administrative law

does not allow for temporary issuance of a permit.

§ 789.12 Judicial Review.

Authority for this Section is Sections 102; 201(c); 501(b); 503, 514(f); 520; and 526 of the Act. Under Section 514(f) of the Act, the applicant or any person adversely affected who has participated in administrative proceedings under Section 514(c)-(e) of the Act has the right to seek judicial review, under Section 526 of the Act, of the action of the regulatory authority in issuing or denying a permit, or of the regulatory authority's failure to act on an application within a time limit prescribed by the Act. This right of judicial review is in addition to the right to a citizen suit found in Section 520 of the Act. The right to judicial review is mandated for State programs by Section 526(e) of the Act. For Federal programs, judicial review is provided for permit cases by Sections 526(b)-(c) of the Act. Section 789.12 is proposed to implement those requirements of the Act.

PART 790—PERMIT REVISIONS AND REGULATORY AUTHORITY REVIEW OF OUTSTANDING PERMITS

§ 790.11 Regulatory authority review of outstanding permits.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 509(e); 511(c); 514; 515(b)(16); 515(c); 515(e); and 711 of the Act. Under Section 511(c) of the Act, regulatory authority is to review each permit at least once during its term. Following this review, the regulatory authority is authorized to revise or modify the permit, to assure compliance by the permittee with the Act. Similar, but particularized review, revision and modification power is provided to the regulatory authority for certain special categories of mining by Sections 515(b)(16), 515(c) and 515(e) of the Act. Section 790.11 is proposed to generally implement these requirements, along with similar provisions for special categories of mining at Sections 715.13, 715.15, 715.16 and 715.18 of this Subchapter.

§ 790.12 Permit revisions.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 507; 508(a); 509(a), (e); 510(a), (b), (c); 511(a); 513; 514; and 515(a), (b) of the Act. Under Section 511(a) of the Act, a permittee may apply for a permit revision during the term of its permit, together with a revised reclamation plan. Under Section 511(a)(2) of the Act, however, those revisions are not to be used to extend the area of operation beyond the original extent permit area, except for incidental boundary revisions. Section 790.12 is proposed principally to implement those provisions of the Act.

PART 791—PERMIT RENEWALS

§ 791.1 Scope.

§ 792.2 Objective.

Authority for this Section is Sections 102; 201(c); 501(b); 503(a); 504; 506; 507; 508; 509; 510; 513; 514; and 515 of the Act.

§ 791.11 General requirements.

Authority for this Section is Sections 102; 201; 501(b); 503; 504; and 506(d)(1) of the Act. Under Section 506(d)(1) of the Act, each permit issued under a regulatory programs can be successively renewed, within the boundaries of the original permit area, in order to continue operations within that area. Section 791.11 is proposed to implement that provision of the Act.

§ 791.12 Application for renewals.

Authority for this Section is Sections 102; 201; 501(b); 503; 504; 506(d); 507; 508; 509; 513; and 515 of the Act. To insure that the regulatory authority can make the findings necessary to authorize permit renewals, Section 791.12 is proposed to require that applications for renewals explain any changes in the original application, provide evidence of the permittee's continued satisfaction of self-insurance requirements, and that appropriate public notice be given of the filing of the application.

In addition, Paragraph (b) of Section 791.12 would provide for appropriate distinction between the review of renewal applications proposing an extension to the boundaries of the original permit area and those applications which would merely propose to continue already permitted operations. In addition, paragraph (b) make allowance for the special exemptions authorized under sections 506 and 510 of the Act for renewing certain permits involving mining on or adjacent to alluvial valley floors.

§ 791.13 Terms of renewals.

Under Section 506(d)(3) of the Act, renewals are not to be granted for a term in excess of that authorized by the Act for the original permit. Section 506(b) of the Act provides for maximum permit terms. Section 791.13 would implement those provisions of the Act.

§ 791.14 Approval or denial of renewals.

The criteria for determining whether an application for renewal of a permit should be awarded are provided for in Section 506(d)(1) of the Act, together with provision for establishing the burden of proof in that determination. Section 791.14 is proposed to implement those provisions of the Act.

PART 792—TRANSFER, SALE OR ASSIGNMENT OF RIGHTS GRANTED UNDER PERMITS

Introduction

1. Section 511(b) of the Act provides that:

"No transfer, assignment, or sale of the rights granted under permit issued pursuant to this Act, shall be made without the written approval of the regulatory authority."

This provision could be construed, of itself, to prohibit the transfer, assignment, or sale of rights granted under any permit without the succeeding party first obtaining a new permit from the regulatory authority. Such a construction is, however, negated by the provision of Section 506(b) of the Act that:

"A successor in interest to a permittee who applies for a new permit within 30 days of succeeding to such interest and who is able to obtain the bond coverage of the original permittee may continue surface coal mining and reclamation operations according to the approved mining and reclamation plan of the original permittee until such successors application is granted or denied."

In order to give effect to both of these provisions of the Act, the Office is proposing Part 792, to provide the standards and procedures for transfer, sale, or assignment of rights under permits issued by regulatory authorities under regulatory programs. The scheme being proposed would establish a two-stage process for obtaining regulatory authority approval of any transfer, sale, or assignment of those rights.

First, the person seeking to obtain approval for transfer, assignment, or sale would have to obtain "approval" of the regulatory authority, by establishing that it satisfies the legal, financial, ownership, and compliance requirements originally imposed upon persons making applications for new permits under the Act. Upon satisfaction of these requirements, the regulatory authority would issue written approval for the transfer, assignment, or sale of rights. Assuming that the successor thereafter continued to operate the surface coal mining and reclamation operations involved in the same manner provided for in the mining and reclamation plan approved as part of the original permit, no further approval by the regulatory authority would be required.

However, if the successor wishes to either change the method of operations from that contemplated under

the original permit or expand the operations outside of that authorized as the original permit area, then further approval would have to be obtained from the regulatory authority. That approval would have to be made through application for an issuance of a revision to the existing permit or obtaining a new permit for areas previously not permitted.

The Office believes that this two-stage scheme will adequately protect public health and safety and the environment in accordance with the Act, while avoiding unnecessary regulatory authority approval, as, for example, if a successor-in-interest were required to obtain a new permit in all cases, regardless of whether the method of operations were to changed or expanded.

2. The major alternative considered to the above scheme was to require:

(a) A person seeking to succeed to interests under a permit to obtain prior approval of the regulatory authority for sucession by merely filing certain limited identification data and establishing the ability to obtain the bond coverage of the original permittee; and,

(b) Then in all cases, after approval, to obtain a new permit covering the entire operations.

This alternative has tentatively been rejected by the Office, because it would allow for transfer, sale, or assignment of rights under permits to be made without scrutiny of the nature of the ownership, financial capability, establishment of the right to conduct operations according to state law, and compliance status of the person seeking approval, which the Office believes Congress intended to be enforced prior to persons conducting surface coal mining and reclamation operations. The Office emphasizes, however, that the selection of alternatives made thus far is only tentative and specifically solicits comments as to whether that is best for implementation of the relevant requirements of the Act.

§ 792.11 General requirements.

Authority for this Section is found in Sections 102; 201(c); 501(b); 503; 504; 506(a); 507(b); 508(a); 509; 510; 511(b); 515; and 517 of the Act. This Section would establish the general rules for the transfer, sale, or assignment of rights granted under permits issued by regulatory authorities under regulatory programs.

§ 792.12 Obtaining approval for transfer, assignment or sale of rights.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 506(a); 507(b); 508(a); 509; 510; 511(b); 513; 514; 515; and 517 of the Act. Applications for approval of transfer, sale, or assignment of rights would be required to contain non-technical legal, financial, compliance and other general information, so that, the regulatory authority could determine whether the applicant has the non-technical qualifications required by the Act to operate a surface coal mining and reclamation operation. In addition, adequate public participation in the process of approval or disapproval of the application would be provided for, by newspaper advertisement of the filing of the application and opportunity for the submission of comments to the regulatory authority. The regulatory authority would then proceed to decide whether to approve or deny the application.

§ 792.13 Requirements for new permits for persons succeeding to rights granted under a permit.

Authority for this Section is Sections 102; 201(c); 501(b); 503; 504; 506(a); 507; 508; 509; 510; 511; 513; 514; 515; 517; and 522(e) of the Act. Under Section 506(b) of the Act, persons succeeding to rights under an existing permit must file an application within 30 days of that succession for a new permit. As interperted by the Office, Section 792.13 is proposed to implement that Section, by requiring persons obtaining approval under Section 792.12 to obtain a new or revised permit from the regulatory authority, if the operation were to be changed from those contemplated under the original permit or expounded outside the original permit area.

SUBCHAPTER J—PERFORMANCE BOND AND INSURANCE REQUIREMENTS FOR SURFACE MINING AND RECLAMATION OPERATIONS

The Act requires that all surface coal mining and reclamation operations be bonded before a permit is issued for conducting those operations. The Act also allows the Office to provide regulations for bonding of underground mining and reclamation operations insofar as those operations may impact on the surface. The regulations of this Subchapter have been developed to provide a maximum of economic incentive for operators to conduct surface coal mining and reclamation operations in accordance with the Act, the regulations of this Chapter, or State law and regulations adopted under it, and the conditions of permits issued for those operations.

These regulations are intended to accomplish two major functions:

(1) Provide a set of minimum standards for establishing a system of bonding to be used by the State regulatory authority if there is an approved State program or by the Office if it is the regulatory authority under a Federal program.

(2) Establish procedures and criteria for the release or forfeiture of bonds to assure the faithful performance of the Act and the requirements of the permit.

The minimum standards are based on the requirement of the Act that in the event the operator does not faithfully perform all of the Act's requirements and permit conditions, the bond will be sufficient to reclaim the affected area to those requirements. Therefore, the criteria for acceptable types of bonds, bond amounts, periods of liability, and terms and conditions for bonds that have been established reflect the best judgment of the Office, and the requirements of the Act. The criteria were developed to assure faithful performance of the Act for any area disturbed by surface or underground coal mining activities.

The authority for these regulations is derived from Sections 102, 201(c), 501(b), 509, 507(b)(16), 515(b)(8) and (10), 516(d), 519, and 529 of the Act, relevant portions of the legislative history, and expert opinion from the Office's staff. Where it is appropriate in the following discussion, specific references to applicable authorities will be cited, in addition to the alternatives considered in arriving at the particular rule.

PART 800—GENERAL REQUIREMENTS

This Part proposes general provisions for bonding and requirements of liability insurance imposed on the permittee. More specific provisions are provided in later parts and sections. In addition, this Part takes into cognizance the difference between the legal authority to impose regulations on the Federal regulatory authority and on the State regulatory authority pursuant to an approved State program.

Section 800.11(a) is intended to make it clear that a permittee is required to file bonds prior to the regulatory authority issuing a permit for coal mining on lands within an existing permit area.

Section 800.11(b), based on Section 509(a) of the Act, reflects the concept that a bond obligation may cover a portion of a permit area for one year periods on lands within that area upon which the operator wishes to engage in surface coal mining and reclamation operations during the term of the permit. Liability will attach to each bond posted for each one year increment of mining to be conducted within the term of the permit. Under this approach, an operator may also seek release of his bond obligation in incremental stages after fulfilling the requirements of the permit, Act and applicable regulations. The major alternative considered was to provide liability coverage for an entire permit area while allowing for incremental bonds in lesser amounts for portions of the

permit area. This proposal would have allowed bond amounts to be calculated on smaller portions of the permit area but would have required the liability for each bond to cover the entire area under permit. The Office believes the proposed rule presents a regulatory scheme more consistent with the language of the Act and the realities of surety transactions in calculating bond amounts in relation to liability incurred.

Section 800.12 identifies the requirement of Section 507(f) of the Act that an applicant for a permit must also provide a certificate of liability insurance or demonstrate that he can satisfy State and Federal requirements for self-insurance. In addition to satisfying those requirements, he must also, at a minimum, meet the standards for self-insurance proposed by the Office.

Section 800.13 proposes responsibilities for the regulatory authority in conducting its bonding program. It should be noted that each regulatory authority must, as part of their program, meet the minimum provisions of this Subchapter. The bond amount must be based on the estimated actual cost to the regulatory authority for completing all the reclamation requirements of the Act or an approved State program. The amounts will be established by the regulatory authority based on the variables that may occur relating to the costs of reclamation, such as the acreage that may be affected, the estimated high-wall of the pit area, the size of the pit area itself, the inherent problems with water that may arise from the geologic structure that is being mined and various other conditions relevant to the cost of reclamation. The major alternative considered was to require the regulatory authority to establish a rate guideline for bond amounts. The guideline would have been developed by a registered professional engineer and subject to approval by the Office. Although considered, this alternative was not accepted because the Office did not wish to burden the States and require an independent analysis that could encourage variation in the rate structure.

Comments were received suggesting changes which would make the surface and underground bond requirements more consistent. These comments were considered and accepted and the surface and underground requirements were combined in the proposed regulations. Bonding requirements for surface and underground mining are based on the costs necessary to repair damage identified and described in the performance standards of Subchapter K. Part 800 combines objectives, requirements to file a bond, requirements to file a certificate of liability insurance, and regulatory authority requirements for both surface and underground mining activities.

PART 805—AMOUNT AND DURATION OF PERFORMANCE BONDS

This Part proposes criteria for determining the initial amount of either a surface or underground coal mining bond. This Part also sets forth the minimum amount for each bond, the periods of liability, and the ability of the regulatory authority to adjust the bond amount if the permittee or any person with an interest that may be adversely affected makes such a request.

Section 805.11(a) provides the standard the regulatory authority must use to determine the appropriate amount of bond for each surface coal mining and reclamation operation. The Section makes it clear that the amount of such bond must be based on the estimated actual cost to the regulatory authority of completing the appropriate reclamation plan and not on the estimated cost to the permittee since in the event of forfeiture, the regulatory authority will be required to do the work. This is an important distinction because in most cases the cost to the regulatory authority will exceed the cost to the permittee.

Section 805.11(b) proposes to provide a non-exclusive list of factors the regulatory authority should use in making its determination as to bond amount. In addition, the regulatory authority should consider the cost it would incur to reclaim an area for which a bond is forfeited, considering the specific standards in Subchapter K.

Section 805.11(b)(3) was added to provide that the bond will be calculated on the additional cost of the regulatory authority which might arise from applicable public contracting requirements or the requirement to bring additional personnel or equipment to the permit area. This is the law in Pennsylvania and it is based on the experience that these public contracting requirements and the costs of bringing personnel and equipment to a site after abandonment are substantial and may result in cost to the regulatory authority of two, three, or perhaps four times what it might be to a permittee to complete the reclamation requirements. This requirement is believed necessary because the law is directed toward the realistic cost to the regulatory authority to complete the reclamation requirements.

Section 805.11(b)(5) was added to provide for consideration of cost increases which may occur on the basis of increases during the preceding five year period. Failure to consider such increases would result in a bond which would not be adequate to complete essential reclamation activities.

The major alternative to the proposed rule was to propose very specific criteria for both surface and underground mining activities. This was rejected in favor of the approach taken because it is more consistent with the requirement in the Act that all estimated costs be covered by a bond. Moreover, specific performance standards upon which the regulatory authority should base its determination as to an amount are already included in Subchapter K and it is therefore unnecessary to reiterate them here.

Section 805.12 is a statement of the minimum amount for performance bonds for surface coal mining and reclamation operations. This Section follows the basic intent of the Act that bonds shall be used to assure the faithful performance of applicable performance standards in the Act and the regulations of this Chapter. The Section also specifies, as does the Act in Section 509(a), that in no case shall the bond be less that $10,000 for a permit area, even if the estimated actual cost would be less.

Comments were received regarding minimum amounts and the Office considered proposing specific amounts for underground mining activities. The Office has not done so for the reasons previously stated and for the additional reason that costs for reclaiming either surface or underground workings may vary significantly from state to state or region to region.

Section 805.13 provides the period of liability or duration of the bonding obligation. The liability period for surface coal mining activities is required by the Act and is coincident with the period for revegetation under Section 515(b)(20). That period is either 5 or 10 years depending upon the average annual precipitation in the area.

The period of liability for underground mining activity in Section 805.13(c) is to be determined by the regulatory authority but such period must not be less than those minimum standards set forth in Section 805.13(c). These standards parallel the basic requirement in the Act for surface coal mining, but require an additional period of time to ensure the success of any facilities or structures installed to meet the requirements of the approved permit (e.g., mine seals).

Comments were received suggesting the bonding period be changed from 5 years to 2 years in the East and from 10 years to 5 years in the West. These comments were not accepted because the Act is quite specific in its requirements for a 5 or 10 year period of liability for surface mining.

Criteria for determining alternative periods of liability for bonding of underground mining were also consid-

ered. It was determined that the Act requires bonding to ensure completion of the requirements of Subchapter K rather than the longer periods of 25-50 years which might be required to control subsidence and mine drainage. The alternative considered was to specify periods of time for liability for various underground mining problems such as mine fires subsidence and seals. The Office believes that at this time the regulatory authority will be in a better position to make a determination of a liability period and has therefore only proposed criteria upon which a liability period could be determined.

Section 805.14 provides for an adjustment of the bond amount in relatively restricted circumstances. Section 805.14(a) reflects the fact that a bond amount might very well be changed by an improved method of mining operation or if the permittee has an accelerated program for reclamation. In that case, the amount of area that is potentially affected by surface mining activity or surface effects of underground mining may be substantially less than might be expected for normal surface or underground coal mining activities. This could justify a reduction in the bond amount. This section also requires, as a result of a comment received, that bond amounts be periodically reviewed to determine whether the original amount remains appropriate. This suggestion provides meaning to the Act's requirement that adjustment may occur from "time to time."

Section 805.14(b) places the requirement on the permittee to prove that his activity justifies a reduction in the amount of the bond. Section 805.14(c) also allows a person who has standing to petition for an adjustment in the bond amount. Section 805.14(d) provides for public participation by requiring the regulatory authority to hold and conduct a hearing on any request for reduction in the bond amount.

The major alternative considered was not to allow for a public or permittee petitioning process, but to allow only the regulatory authority to make appropriate adjustments as is provided in Section 509(e) of the Act. This alternative was rejected in favor of the public participation approach reflected in the proposed rule because of a comment the Office received and Congress' stated purpose in Section 102(i) that the Office provide procedures for public participation in the development or revision of standards promulgated under the Act.

PART 806—FORM, CONDITIONS AND TERMS OF BONDS AND LIABILITY INSURANCE

Section 806.11(a) provides that there are essentially two forms of performance or indemnity bonds which a regulatory authority can or shall offer. The first form is an indemnity agreement from the permittee, cosigned by a corporation licensed to do business in the State where the operation is located and payable to the regulatory authority.

Section 806.11(a)(2) provides that the bond may also take the form of a collateral bond which is an indemnity agreement executed by the permittee or applicant pledging some negotiable securities such as certificates of deposit, bonds from a State or the United States, or cash.

Section 806.11(b) would also allow a self-bond. In essence, a self-bond is an indemnity agreement from the applicant not supported by a separate surety guarantee or by pledge of collateral. It is a contractural promise by the permittee that he will pay a sum certain if the permittee fails to comply with the requirements imposed upon his operation for reclamation and performance. Four requirements are proposed before an applicant can qualify for self-bonding. The first comes from the Act and provides that the applicant must designate a suitable agent to receive service of process. The second requirement is that an applicant demonstrate a history of compliance with this Act and his ability to comply by not having forfeited a performance bond; by not having failed to abate outstanding notices of violation or orders of cessation; by not having demonstrated a pattern of willful violations of the Act; or by not being delinquent in payment of either the reclamation fee required under Subchapter R or a civil penalty assessment under Part 845.

The major alternative considered for criteria to demonstrate a history of compliance with the Act was a system of accumulated civil penalty points over a 10 year period. This approach was rejected because the time period was burdensome and the Office would not be legally justified in requiring States to have a civil penalty points system. It is the Office's view that the Act intends that an operator demonstrate more than a simple financial ability to pay the bond should it have to be forfeited. The Act contains a provision, in Section 509(c), providing that the operator shall have demonstrated a continuous operation sufficient for authorization to self bond. Proof of continuous operation prior to this Act is not indicative of the fact that the operator can in all respects comply with the Federal Act. Congress did not intend that continued existence prior to the Act to demonstrate sufficiency for self bonding. Legislative intent may be viewed as relating to continued existence of a coal mine operator under and pursuant to this Act. That view then, justifies the requirement that the applicant must demonstrate a history of compliance with the requirements of this Act before he qualifies for self-bonding. Self-bonding, if it is not properly regulated, may result in a break of the chain of liability that flows from the moment of permit application until completion of the permit reclamation which, if not carefully regulated, may allow unqualified operators or operators that have no intention whatever of complying with the requirements of the Act to escape the ultimate penalty provided in the law—the forfeiture of the bonds. No time period is specified for demonstrating a history of compliance because this will vary from State to State and operator to operator. However, the Office intends to look at an applicant's compliance record in terms of the criteria in Section 806.11(b)(2) from the beginning of an applicant's responsibility under the Act.

Section 806.11(b)(3) proposes that the applicant must demonstrate a net worth certified by a certified public accountant of no less than twice the total amount of bond obligation on permits issued. The Act provides for a demonstration by the operator of his financial ability to support a promise to pay.

The final requirement for self-bonding in Section 806.11(b)(4), is that the indemnity agreement must be executed by the applicant and those individuals with responsibility for the mining operation, whether it is a corporation, partnership, individual or any other form of ownership. The purpose of this subsection is to bind in this bond agreement not only the applicant but also all those individuals that might have a personal stake or personal authority to make decisions relating to whether or not the applicant does ultimately comply with the Act. If all of the relevant individuals sign, not only in their corporate or partnership capacity, but in their individual capacity as well, there is a tremendous incentive upon all operators who do manage to qualify for self-bonding to comply to the fullest extent with the requirements of the Act.

The alternative of just having an indemnity agreement signed only by a corporate applicant or a partnership is unacceptable in that the liability would only flow to the corporation or the partnership which can be dissolved rather quickly, thereby leaving the regulatory authority without an effective remedy to cover the costs of unfinished reclamation work. In such a case there would be no assets to for-

feit and the regulatory authority would be left with no effective remedy against a defaulting operator.

Section 806.11(c) implements the Act's requirement in Section 509(c) that the Office approve alternative bonding systems. Any alternative system must meet at a minimum the two main goals of a bonding program. The first goal is to assure that the regulatory authority will have available, in the event of forfeiture, sufficient money to complete the reclamation requirements. Second, a bonding system must provide a substantial economic incentive for the permittee to comply with all reclamation requirements. Either a surety bond or a collateral bond makes the liability for which the operator may ultimately be responsible a significant incentive for him to comply with the Act. In self-bonding, the requirement that the indemnity agreement provide joint and several liability for all individuals involved in a particular operation gives them all a significant incentive to comply with the Act.

The Office invites comments on alternative bonding methods to those proposed. In suggesting alternatives, attention should be directed to specific feasibility studies or risk analyses for each alternative. The office will consider all suggestions in formulating a final rule.

Section 806.12 contains the terms and conditions for bonds. Particular attention should be paid to the requirements for surety bonds which were drafted to prevent any abuse in the system that may leave the regulatory authority without an effective remedy.

Section 806.12(e) contains a number of special conditions which ought to be imposed on surety bonds. The first major requirement is that the bond written by a surety company shall not be cancellable at any time by the surety for any reason, particularly an alleged nonpayment of premium by the operator or for an alleged bankruptcy by the operator. The reason for accepting a surety's co-guarantee is that even if the operator fails in business the regulatory authority will be able to look forward to a financially stable and secure co-guarantor of the bond for purposes of collection at the time of bond forfeiture. In accepting a surety company as a guarantor of a bond the regulatory authority has a right to expect that that promise will be good for as long as the applicable period of liability established for the particular mining activity involved.

The second major restriction on surety bonds relates to the maximum single obligation. In Pennsylvania, the maximum single obligation is defined as ten percent of the capital surplus account. A standard based on the capital surplus account is an indication of the liquid assets of a surety company. Most States do have a maximum single obligation applicable to surety companies in order to assure that a surety company does not engage in the practice of writing bonds grossly in excess of their ability to pay if there is a default. This Section has been drafted to reflect the fact that some States might have other requirements in terms of a maximum single obligation, or might not have any requirement, in which case the ten percent amount would be applicable.

The third major restriction on surety bonds is a requirement that a surety company not write bonds in excess of three times the maximum single obligation for any particular operator. If a company were allowed to write bonds for many permit areas on behalf of a single operator in excess of this amount the surety company would almost surely declare bankruptcy or declare liquidation if operator failed. It should be noted that when an operator fails on one permit, the operator may also default on every bond obligation at every permit site because failures are usually related to a failure in business, bankruptcy or the death of the principle. It seems clear that the total amount of a bond obligation that might be assessed upon default against a particular surety company, if it is not limited to some reasonable amount as proposed, might very well overwhelm the surety and force it into bankruptcy. Such an occurrence would not adequately protect the regulatory authority's need to provide a safe source of funds should an operator fail. In Pennsylvania, 5 surety companies in the last ten years have gone into bankruptcy because they wrote excessive surface mining surety bonds which, when forfeited, rendered them incapable of meeting their other obligations.

Section 806.12(e)(4) was added to allow the regulatory authority to provide in the bond that the amount of the bond shall be confessed to judgment upon forfeiture if confession of judgment is authorized by State law. This will allow the regulatory authority to collect the forfeiture amount without a separate legal proceeding to obtain judgement on the bond amount.

Section 806.12(e)(5) provides that the surety and the permittee or applicant be jointly and severally liable so that the regulatory authority can seek collection of the bond against either or both of these parties.

Section 806.12(f) proposes conditions for collateral bonds. The first requirement, in Section 806.12(f)(1), is that the regulatory authority keep custody of all collateral pledged by the operator. Without possession, the pledge of collateral may be nothing more than a hollow promise at the time of forfeiture.

The second requirement on collateral bonds is that the collateral or securities be valued at current market value and not face value. Bonds may be discounted or otherwise have different values not at all related to the face value of the collateral. In order to properly assess the value of a bond related to the amount required, it is necessary to valuate it at the current market.

The third requirement relates to certificates of deposit and provides that such certificates of deposit must be assigned to the regulatory authority upon the books of the bank issuing such certificates. The assignment on the books of the bank is essential in order to validate the regulatory authority's control over the certificate, not merely for bond forfeiture but also to protect it against third-party creditors which might try to attach or seek to attach such collateral deposited with the regulatory authority.

The fourth requirement on collateral bonds is that certificates of deposit shall not exceed individual certificates in the amount of $40,000. The $40,000 was selected because it is the maximum amount insured by FDIC or by FSLIC.

The fifth limitation requires that banks issuing such certificates of deposit waive all rights of set off or liens against the certificates. Under banking law, the bank does have a right of set off against certificates unless it is waived. In most circumstances an operator will go to a bank from which it has borrowed money to purchase these certificates of deposit in order to do business with one bank. If the bank fails to waive its right of set off or its right to a lien, they may well maintain a prior right upon the forfeiture of an operator because of a failure in business. In most circumstances, the inability of an operator to pay creditors would leave the bank in first position to take the certificates. The regulatory authority must always be in first position to take the certificates upon default and not subject to any other prior creditor claims.

The sixth requirement for collateral is that certificates of deposit be automatically renewable. This is simply a practical requirement. Some certificates may provide for maturity terms as little as 6-months or a year or for as long as 8 years. If the regulatory authority does not get automatically renewable certificates it would be necessary for it to keep passing back and forth certificates, getting new ones, at every point of maturity. The constant churning of these certificates would be an intolerable administrative burden.

Section 806.12(f)(7) is the final limitation and provides that the regulatory authority will take in a sufficient amount of certificates to assure that the bonds can be liquidated for 100 percent of the declared bond amount. One of the implicit limitations on certificates of deposit is the requirement by the Federal Reserve that a penalty be assessed against such certificates of deposit for early withdrawal prior to maturity. This penalty is a ninety-day amount of interest that would otherwise be earned by the certificate. If a certificate is cashed prior to maturity, the bond or certificate could be valued, because of the penalty, between 92% and 95% of its face value.

Section 806.13 is drafted to permit replacement of bonds with other acceptable forms, provided that no operator may replace existing surety or collateral bonds with a self-bond. A self-bond provides substantially less proof or guarantee of payment. Collateral bonding is substantially superior since the regulatory authority already has the cash or value within its possession and need not go through a court proceeding to obtain collection. Although this section does not reflect it, it may be important to require that a company or operator that is subject to enforcement action, not be allowed to exchange collateral bonding for surety bonding while the action is pending. The Office invites comments on such a proposal or similar proposals that may afford additional protection to the regulatory authority.

Section 806.14 provides the terms and conditions for liability insurance. Minimum amounts for coverage are provided although the articulated standard in Section 806.14(a) is that coverage shall be "in an amount adequate to compensate all persons injured on property damaged as a result of surface coal mining and reclamation operations . . ." The alternative considered was not to include minimum amounts because the Act does not speak to this issue. However, the Office believes that minimum coverage, based on prevailing liability insurance practice, should be included to provide a guideline for the regulatory authority. One commenter suggested that the minimum amount for liability coverage should be tied to the highest total amount ever awarded or settled upon as damages to tort claimants for personal or property damage resulting from surface coal mining and reclamation operations. This was considered to be too burdensome. The Office is interested in receiving comments regarding the inclusion of such minimum amounts and, if inclusion is warranted, what minimum amounts should be provided.

PART 807—PROCEDURES, CRITERIA AND SCHEDULE FOR THE RELEASE OF BONDS

Part 807 proposes procedures for the release of bond.

Section 807.11(c) from earlier drafts was rewritten as new paragraphs (c) and (d) to more closely follow the requirements of Sections 519 (b) and (d) of the Act.

Section 807.11(e) refers to hearings for bond release according to State administrative law not State adjudicatory law to clarify that these proceedings are administrative rather than judicial. Section 807.11(e) was also rewritten from previous drafts to change the name of the informal hearing to informal conference which is what the Act provides. One commenter suggested that election of an informal proceeding should not prejudice the rights of nonconsenting parties. This comment was accepted because Section 519(g) of the Act indicates that such a provision was intented.

It should be noted that the use of the phrase "any person with a valid legal interest which might be adversely affected" has been defined in Section 701.5 of this chapter to encompass the concept of legal standing to participate in adjudicatory proceedings. This phrase has been construed as broadly as possible while adhering to the legal principles enunciated by the Supreme Court of the Unites States.

Section 807.12 provides for criteria for bond release. The major requirement is that no bond shall be released until the permittee has complied with all the applicable requirements and standards for reclamation and has met all the conditions of its permit. The second requirement for release of bonds is that the regulatory authority retain, at all times up until final completion and final release of all bonding, at least $10,000 in bond amount and such additional amounts as may be determined by the regulatory authorities to be necessary to cover the costs of remaining reclamation to be done. This requirement is supported by the Act which provides for a minimum bond of not less than $10,000 thereby indicating a Congressional intent to require at least $10,000 to be maintained at all times by the regulatory authority until release is accomplished.

Section 807.13 proposes a release schedule for performance following the requirements of Section 519(c) of the Act. Two additions have been proposed. First, after revegetation has been established, an additional 25% of the bond may be released, for a total of 85% to that point in the reclamation effort. One commenter suggested this was too high a percentage of release at that point in time to provide the economic incentive necessary to an operator to complete reclamation. Moreover, if the operator did not complete reclamation, the regulatory authority would be left with an inadequate amount to complete the reclamation plan. Comments on the merits of either approach are invited.

Second, the Office proposes, in paragraph (c), to hold at least $10,000 of a bond regardless of an operator's eligibility for release under paragraphs (a) and (b). This approach is consistent with other requirements of this subchapter and Section 509(a) of the Act.

PART 808—PERFORMANCE BOND FORFEITURE

Part 808 proposes those provisions for determining bond forfeitures.

Section 808.11 provides the general provisions for determining bond forfeitures and expresses those conditions which will require the regulatory authority to forfeit the bonds. This Section proposes those conditions for which a bond forfeiture is mandatory and those conditions for which forfeiture is discretionary.

Section 808.11 provides general conditions upon which a bond forfeiture might occur or shall occur for failure to comply with the applicable performance standards, or for violating any other condition of the bond. A proviso was added in Section 808.11(b) that the regulatory authority may withhold forfeiture if the permittee agrees to a compliance schedule to remedy the violations of the bond conditions. It is always desirable to get the permittee to comply with his reclamation plan if it is at all possible because the cost to the public if it had to do it is usually in excess of what it would cost a permittee. Moreover, reclamation by the regulatory authority may be delayed for many years for a variety of reasons relating to collection upon the bond or contracting requirements to accomplish the reclamation. Therefore, this section as proposed, provides an incentive for the operator to come forward and agree to a compliance schedule, allowing the regulatory authority to engage in that option rather than compelling it to go to forfeiture.

Section 808.12 specifies procedures which the regulatory authority shall engage in prior to bond forfeiture. These procedures for bond forfeiture simply provide that the regulatory authority send written notification to the permittee and, if it is a surety bond to the surety, of the determination to forfeit and the reasons for such forfeiture.

The Section also requires the regulatory authority to advise the permittee of such rights of appeal that might be available. If no appeal is filed or if an appeal is dismissed, the regulatory authority may proceed with the collec-

tion upon the bond as may be provided by applicable local laws. A forfeiture under this section by the regulatory authority is a final decision by the authority, not appealable within the agency or otherwise, except as provided by applicable State or Federal law for such administrative actions.

Finally, this section requires that if an appeal is filed the regulatory authority will defend such action or perhaps reach some kind of compromise with the operator to assure that the required reclamation is performed. An additional requirement was added in Section 808.12(c) that the regulatory authority may forfeit any or all of the bonds or part of bonds deposited for an entire permit area in order to satisfy the obligations of reclamation for a violation at any one particular area or part of an area. This approach will insure the regulatory authority against being caught with a bond of insufficient amount to satisfactorily complete reclamation in an area because the bond was not properly calculated or adjusted. This approach will also help to eliminate economic or business factors from encouraging an operator to abandon a particular site before all work is completed.

Section 808.13 provides criteria for forfeiture. It identifies three areas where forfeiture would be mandatory and other conditions where forfeiture may be involved. The first set of requirements where the bond forfeiture is required are standard. In those three circumstances the bond shall be forfeited because the permittee has indicated an inability to comply with the Act in a major respect, unless it is possible to reach some compliance agreement and schedule with the operator. It may be appropriate to provide that the regulatory authority issue a notice of intent to forfeit in order to allow the mine operator to come forward with a compromise agreement of compliance. Only in the case of a total business failure or death of the principle of the operator will there be no way to effectively reach a compliance agreement. The Office invites comments on whether such a notice of intent should be provided as well as other criteria for triggering a bond forfeiture proceeding.

Section 808.13(b) provides for a permissive declaration of forfeiture of a bond. These provisions reflect problems that have occurred in Pennsylvania. They are indicative of a business failure and the inability of the permittee to comply with the Act. A provision was added so that a permissive bond forfeiture can occur if the permittee cannot demonstrate or prove that it will be able to operate in compliance with the Act. Such a provision operates to place the burden on the permittee to prove that he can comply with the Act although either of the conditions in paragraphs (b)(1) or (b)(2) have occurred. If he can prove continued compliance with the Act, then forfeiture is unlikely. If he cannot make the required showing, the regulatory authority is likely to forfeit the bond. The event of a bond forfeiture gives the regulatory authority a certain amount of leverage to compel some successor in interest, such as a receiver in bankruptcy, to comply with the legal requirements imposed upon the permittee for the operation.

Section 808.14 is a statement of the two bases for determining the forfeiture amount. Section 808.14(a) is simply a general statement that the amount shall be the estimated actual cost to the regulatory authority or its contractor to complete the reclamation plan. Section 808.14(b) provides a different mechanism that may be of greater practical benefit to the regulatory authority when it must act expeditiously. This section allows the regulatory authority to forfeit the entire amount of the bond to which liability is attached, complete the required reclamation, and then return the remaining amount with interest to the surety or to the permittee.

PART 809—BONDING AND INSURANCE REQUIREMENTS FOR ANTHRACITE SURFACE COAL MINING AND RECLAMATION OPERATIONS

This Part sets forth the general requirements for bonding and insuring anthracite surface coal mining and reclamation operations for states which regulated anthracite coal mining by having environmental protection standards in existence as of August 3, 1977. Section 529 of the Act, from which the authority for this Part is derived, is believed to only cover, and thereby exempt, Pennsylvania from certain provisions of the Act and this Chapter. As a result, this Part is only applicable to persons engaging in or seeking to engage in anthracite surface coal mining and reclamation operations in Pennsylvania.

Section 809.12 proposes the requirements for bonding and insuring anthracite coal mining operators in Pennsylvania. Basically, Section 529(a) of the Act requires that all anthracite operations be subject to the general bonding provisions, except for the period of revegetation responsibility and bond limits. In those cases, Pennsylvania law, regulations and administrative guidelines will apply. Section 809.12(a) simply provides the statutory exemption and directs the Pennsylvania regulatory authority to apply its laws, regulations, and guidelines to bonding limits and liability periods for anthracite operations.

SUBCHAPTER K—PERMANENT PROGRAM PERFORMANCE STANDARDS

Parts 810–828 contain the minimum performance standards which must be contained in a State program in order for the program to be approved by the Secretary. These performance standards also represent the minimum standards which will be contained in a Federal program adopted for non-Federal and non-Indian lands within a State.

Parts 810–812 discuss matters of general applicability throughout the Subchapter. Parts 815–828 contain the standards for coal exploration, the different methods of coal mining, those special mining situations identified in the Act as having to meet separate or additional performance standards requirements, coal processing facilities operated independent of mines and *in situ* processing.

The manner in which this Subchapter is to be utilized in developing a State or Federal program is contained in Subchapters C and D, respectively. All operations discussed in Subchapter K will be subject to permit requirements at least as stringent as those contained in Subchapter G upon implementation of a State or Federal Program. All these operations will also be subject to bonding requirements which meet the standards of Subchapter J. Inspection of operations and enforcement of applicable performance standards are governed by Subchapter L and any additional requirements of the approved State program or the applicable Federal program.

The drafters of Subchapter K considered a great deal of technical literature, all existing State regulatory schemes for coal mining, experiences under OSM's interim regulatory program, the legislative history of the Act, experience and expertise of other government agencies, and comments received on prepublication drafts of this Subchapter, in arriving at the version of the proposed rules published today. These sources are detailed in the separate discussions of the various parts of this Subchapter set forth below.

This Subchapter contains minimum performance standards applicable to all persons engaged in coal exploration or surface coal mining and reclamation operations, including the surface effects of underground mining, in situ processing and coal processing facilities operated independent of mines, to the extent the activities occur on non-Federal and non-Indian lands in a State with an approved State program or in which a Federal program has

been implemented. Additional and more stringent requirements may be found in the State or Federal program, in other State laws or in conditions imposed on the operator by the regulatory authority in the permit.

In developing these performance standards, the Office of Surface Mining has attempted to strike a reasonable balance. We have weighed the additional cost and inconvenience to the operator against the necessity to protect against long term environmental damage and potential harm to the public. We believe the obligations imposed by the performance standards are reasonable and necessary to accomplish the intended goals of the Act.

The proposed rules published today contain the minimum performance standards which would be in effect under an approved State program or a Federal program. In drafting this Subchapter, consideration was given to organizing each related group of Sections in a format different from that contained in the version published today. This alternative format would have set forth the standards much as they are proposed today and then have followed each related group of Sections with two additional provisions. The first additional provision would have set forth the minimum objectives to be achieved if a State wished to adopt different detailed requirements from those proposed in the OSM regulations. The second additional provision would have set forth any regional variations which would apply to the performance standard.

The alternative format was rejected primarily because the drafters believe that a more meaningful range of regional variations and criteria for evaluating alternative State proposals can be achieved by eliciting comments to the single standard proposed. OSM encourages the public, in reviewing Subchapter K, to suggest regional variations and criteria for evaluating State suggestions for each of the many standards contained in this Subchapter. Those comments which will be most helpful are those which contain proposed language for the rules and which are accompanied by technical or other literature supporting the proposal. After these regulations are adopted in final form, additional regional variations for alternative means of obtaining the goals of these performance standards can be authorized by amendment to Subchapter K either on OSM's initiative or in response to a petition for rulemaking under Section 700.12 of this Chapter of regulations, or in the rulemaking proceeding which will accompany approval of a State program or adoption of a Federal program.

Each Part in this Subchapter is organized to parallel the applicable topics as they are contained in the Act. OSM considered organizing Parts 816 and 817 differently. This alternative organization would have set forth the performance standards in a manner which parallelled the most common logical mining sequence, dividing each Part into subparts for site preparation, mining, reclamation and permanent abandonment of the minesite. The prepublication drafts distributed by OSM on July 21, 1978, contained Part 816 organized in this alternative fashion. Many comments were received both from within OSM and from the public, objecting to the awkwardness and confusion generated by the logical mining sequence. Most commenters agreed that it would not assist the mine operator to comply with the standards nor would it aid enforcement. After consideration of these comments, the logical mining sequence was abandoned for the topical format contained in these proposed rules.

One significant issue OSM intends to address in its final rules, and which is not adequately treated in the proposed rules published today, is pre-existing non-conforming structures. Public comment on this issue is encouraged.

The following are the structures which might be found on a minesite, either completed or in construction, at the time these regulations go into effect: Roads and associated structures; Impoundments; Sedimentation ponds; Fills; Berms; Benches; Waste banks; Waste dams; Discharge structures; Diversions; Highwalls; Rail loops; Rail sidings; Rail spurs; Refuse areas; Shafts; Spoil piles; Utility lines; Terraces; Drains; Wells; Exploration holes; Boreholes; Barricades; Fences; Bridges; Culverts; Storage areas; Mine buildings; Tipples; Storage or repair facilities; Surge ponds; Processing plants; Slurry pipelines; Conveyors; and other manmade structures or areas disturbed by mining.

Non-compliance on the effective date of a State or Federal program might be regulated in any one or more of the following alternative manners:

(a) The regulatory authority might require that the structure be brought into compliance or demolished as soon as possible, based on a proposed reconstruction or demolition plan submitted by the operator with the permit application and approved by the regulatory authority as consistent with sound engineering practices and the purposes of the Act.

(b) The regulatory authority might require stabilization of the area and cessation of operations until the structure is brought into compliance.

(c) The regulatory authority might grant a variance for the structure, to the extent it was completed or noncomplying construction was committed to, prior to the effective date of the State or Federal program.

(d) The regulatory authority might grant a variance for the structure, to the extent it was completed or noncomplying construction was committed to, on the date these regulations become effective.

Different structures may require different treatment, depending on the feasibility of reconstruction or modification and the environmental effect of the noncompliance and of reconstruction or modification. The public should frame their comments on this issue in terms of the particular structures for which a recommended alternative is proposed. In addition, technical literature and other background material would be useful to the office in evaluating the comments.

OSM has not decided whether to promulgate separate rules for each type of pre-existing nonconforming structure, or a single general rule to cover this subject. However, OSM currently believes that these structures should be required to comply with the requirements of this Subchapter before a permit is issued or as soon as possible thereafter.

PART 810—PERMANENT PROGRAM PERFORMANCE STANDARDS—GENERAL PROVISIONS

PART 811—APPLICABILITY TO REGULATORY PROGRAMS

PART 812—INDEX

These Parts introduce the permanent program performance standards which are contained in Subchapter K.

In Part 810, Section 810.1 briefly summarizes the role of Subchapter K in the permanent program regulations and Section 810.2 highlights major categories of mining activities and their effects which are addressed in Subchapter K. The list is not intended to be exhaustive. Rather, it is provided to enable the reader to obtain an overview of several of the types of mining practices and effects of mining which the Act and this lengthy and highly technical Subchapter seek to address.

Part 811 is intended to enable the reader of the regulations to determine the relationship between the performance standards in this Subchapter and the performance standards requirements which will be implemented under State programs and Federal programs for non-Federal and non-Indian lands. The Office expects that State programs will vary in the degree of stringency imposed on various mining and reclamation activities. In some States, programs existing on the date of these proposed rules impose

some performance obligations which exceed the requirements of this Subchapter. States are in the best position to evaluate the needs of their mining industry and environment and to determine when standards stricter than those set forth are appropriate. The Office is giving the States latitude to structure the environmental and other performance standards of their programs around their needs based on different physical and environmental circumstances in a State. Any variations, additions, or supplements in the State programs are permissible so long as they are not prohibited by other portions of this Chapter, the Act, or other applicable laws or regulations, and so long as the standards implemented by the State include, at a minimum, standards as stringent as this Chapter.

Section 811.12 provides that the standards of this Subchapter will constitute the minimum standards under a Federal program, which may include additional, more stringent, requirements if appropriate to achieve the purposes of the Act. The Office considered providing that the standards of this Subchapter would be the performance standards under every Federal program, without any variation. However, Section 504(a) of the Act requires each Federal program to "take into consideration the nature of the State's terrain, climate, biological, chemical, and other relevant physical conditions." Accordingly, Federal programs may include more stringent requirements, if conditions require them to meet the purposes of the Act.

Because of the length, complexity and highly technical nature of this proposed Subchapter, the office believes it would be useful to assist the reader with the detailed index system which is contained in Part 812.

Section 812.12 contains an alphabetical list of topics addressed in this Subchapter with citations to the Sections of the Subchapter where they are discussed. The Office has attempted to provide a complete list. However, references may inadvertently been omitted or misstated, and the reader should not rely exclusively on this list.

OSM is particularly interested to know whether this index system is useful to the reader. Also, we would appreciate receiving comments as to how the system might be improved. For example, should there be a similar alphabetic index to the entire Chapter? Also, should the index in Part 812 be expanded to include references to portions of the permit regulations and bonding regulations which relate directly to the performance standards?

PART 815—COAL EXPLORATION

Part 815 proposes minimum perform- ances standards for persons involved in coal exploration and is intended to prevent degradation of environmental quality and danger to life and property during and after coal exploration activities.

The philosophy of this Part is that any person engaged in coal exploration activities must conduct such activities with the least resultant damage to the environment.

Proposed Section 815.4 reflects the requirements of proposed Part 776 and the reader is referred to the discussion of that Part, earlier in this Preamble.

Section 815.11 proposes that persons conducting exploration shall, while onsite possess evidence of their compliance with the notice and authorization requirements for exploration. The Office feels this requirement is necessary to monitor unauthorized exploration.

Subsection 815.12(a) proposes that the exploration operator record the amount of coal removed during exploration, and keep current records and display them upon demand to the regulatory authority.

Proposed Subsection 815.12(c) would require that the operator limit vehicular traffic. The Office realizes that a certain amount of travel by light utility vehicles off established roads is necessary in coal exploration and considers that such travel can be done with reasonable care during dry periods in most areas without significantly damaging the environment. Public comment on this issue is invited.

Subsection 815.16(e) proposes minimum topsoiling and revegetation standards for areas of heavy usage. The Office expects that most true exploration will not require significant topsoiling or revegetation.

Subsection 815.12(h) proposes measurement, to the maximum practicable extent, of important environmental characteristics of the exploration area. The measurements pertain to but are not limited to water quality, revegetation, soils, vegetation, hydrogeology, biology, geology, alluvial valley floors, air quality, meteorology, and surface water flow.

Subsection 815.12(i) proposes that all environmental monitoring data collected during exploration be made available to the regulatory authority. Public comment is solicited on the extent, if any, to which the data should be deemed confidential, and the extent to which it might be available for use during proceedings to designate land unsuitable under proposed Parts 760–765.

Section 815.13 proposes that a person selling coal removed during exploration must have a permit to do so, unless the person has demonstrated to the regulatory authority's satisfaction that the sale is necessary for testing purposes. The Office believes that if a person engaged in exploration is selling the coal extracted during purported exploration, the operation should be under a permit as are all significant commercial mining operations. However, the Office believes that if the person is solely selling extracted coal to a testing company in order to obtain required information, the person should be allowed to do so without having to obtain a permit.

PART 816—PERMANENT PROGRAM PERFORMANCE STANDARDS—SURFACE MINING

Sections 816.1 and 816.2 set forth the scope and objectives of this Part, respectively. Part 816 contains the minimum performance standards which will be applicable under a State or Federal program for surface mining activities. Surface mining includes methods commonly known as contour mining, area mining, and strip mining and removal of coal from waste piles.

§ 816.11 Signs And Markers.

This proposed section specifies requirements for identification and warning signs and for markers of permit perimeter, buffer zones, and topsoil storage piles. The regulations seek to balance the desire to reduce cost and bother to the permittee against the need for ample identification in the interest of citizen participation, inspection by the regulatory authority, employee guidance and protection of the public. Proper markings of perimeters and working areas will be particularly valuable in preventing equipment operators from inadvertently entering areas not authorized for disturbance and should help eliminate arguments over location of perimeters. Properly posted signs and markers reduce hazards to the health and safety of the general public and mine personnel and prevent adverse affects to the environment.

The authority for this Section is found in Sections 102, 201, 501, 503, 504, 515, 517, and 701 of the Act.

Literature on which the requirements are based include:

1. 30 CFR 77.1202.

2. Colorado State Land Reclamation Board, Rules and Regulations promulgated under the Open Mining Reclamation Act of 1973.

3. Maryland Department of Natural Resources, Geological Survey-Bureau of Mines, Bituminous Coal Strip Mine and Auger Mine Regulations of 1973, Section 08.06.01(.03).

4. Montana Department of State Lands, Rules and Regulations promulgated under the Montana Strip and Underground Mine Act of 1978, Section 26–2.10(10).

5. Ohio Department of Natural Resources, Division of Reclamation, Rules Nos. 1501:13–9–01, 1501:13–9–05

(May 15, 1978, as revised and effective August 28, 1978).

6. Ohio Rev. Code Ann. Section 1518.16 (1975).

7. Tennessee State Department of Conservation, Division of Surface Mining, Rules and Regulations, Chapter 0400-3-2.05, 1975.

8. West Virginia Department of Natural Resources, Surface Mining Reclamation Regulations, Chapter 20-6, Series VII, 1973.

9. Wyoming State Department of Environmental Quality, Land Quality Division, Land quality rules and regulations, 1975 (as amended).

Marker dimensions are not specified in OSM's permanent program performance standards. However, signs and markers would be required to be permanently installed and to meet other general criteria of the proposed Section. Several States establish specific marker specifications: 30 CFR 77.1303(g); Maryland, at Section 08.06.01(.03); Ohio Rev. Code Ann. Section 1513.16(b)(1); Tennesse, at Chapter 0400-3-2.05; West Virginia, at Sections 2.27 and 10.09.

The drafters considered requiring identification signs to carry all pertinent permit and approval numbers. However, this alternative was rejected in favor of the proposed Subsection (c) which requires only the current coal mining and reclamation operations permit numbers. Existing State rules and regulations require the posting of similar identification signs. For example, Colorado requires posting of signs during application for a permit (Colorado, 1973). Maryland operations must be identified by posting a monument at the beginning of each operation and as otherwise required (Maryland, at Section 08.06.01(.03) while other States specify actual sign dimensions as found in the following references. Ohio Rev. Code Ann., Section 1513.16(b)(1), and Tennessee at Chapter 0400-3-2.05.

Signs and markers shall be maintained for as long as they serve a purpose. The operator's obligation extends throughout the life of the permit. Such requirements will result in periodic inspections being made to ensure that signs and markers are in place and legible and to insure that the information they convey is correct. This will assist enforcement and make more meaningful all opportunities for citizen involvement in the regulation of mining and regulation activities.

The drafters considered specific requirements for minimum marker spacing but decided to leave responsibility for determining spacing of perimeter markers to the discretion of the regulatory authority so that specific site conditions could be considered. State regulations currently require that markers be placed at the end of the strip area or as otherwise required. (See Montana and Wyoming rules and regulations.)

Buffer zones are to be identified and posted to assure that unnecessary disruption and degradation of stream channels will not occur. The drafters considered requiring buffer zone markers to be posted at no more than 200-foot intervals along the interior boundary of the buffer zone and requiring that the marker say: "Buffer Zone—Limited Access." These specific requirements were rejected in order to permit greater flexibility in type and minimum spacing. Buffer zone markers are deemed necessary to provide notice to equipment operators that special effort is required when mining in the vicinity of streams. It should be noted, however, that the requirement for buffer zone markers does not preclude mining through streams where specifically approved by the regulatory authority under the controlled conditions established in proposed subsection 816.57(a).

Although the proposed requirement for blasting signs, markers, and signals was believed to be excessive during public review of the interim regulations, this requirement will remain intact to provide notification to any person entering the permit area of the potential hazard relating to the use of explosives and flyrock. However, in order to provide for greater flexibility in selecting type and size of marker to be placed, only general guidelines are included in these draft regulations.

Additional safety precautions must be exercised in the immediate vicinity of the blast area. As stated in Tennessee, Chapter 0400-3-2.05, MSHA regulations, 30 CFR 77.1303, the operator must guard those areas in which holes are awaiting firing.

Adequate marking of topsoil storage areas is required around all areas utilized to stockpile topsoil or other designated subsoils pursuant to Section 816.23. Some commenters objected to the requirement for topsoil markers, on the grounds that topsoil storage areas are well known to employees and that disturbance of topsoil storage areas is not currently a significant problem. The Office proposes that topsoil markers continue to be required because these proposed regulations will result in more care in topsoil handling and storage than has previously been the practice.

One commenter has suggested that an additional provision be added in this Section to require a sign on coal processing waste dams, as currently proposed in subsection 816.93(i). Public comment is solicited as to whether the requirement for dam signs should appear only in Section 816.93, only in Section 816.11, or in both places.

§§ 816.13-816.15 Casing and sealing of drilled holes and openings.

Except for the differences noted below, proposed Sections 816.13-816.15 are substantially identical to the proposed underground mining performance standards in Sections 817.13-817.15. The reader is referred to the appropriate portions of the Preamble for Part 817 for information concerning the technical basis, alternatives considered, and statutory authority for these Sections. In addition to the Sections of the Act cited in those portions of the Preamble, these Sections are based on Section 515 of the Act. While the Office considers the effects of improperly protected holes and entryways to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should be appropriately reflected in the regulations.

While proposed Section 816.13 requires holes to be closed as they are uncovered in the course of surface mining, Section 817.13 requires all holes in the permit area to be closed. An additional difference is proposed with respect to precautions to be taken in connection with openings to be used for the return of underground waste to mine workings. These distinctions are required by the distinct differences between surface mining and deep mining.

§§ 816.21-816.25 Topsoil.

These Sections contain proposed regulations for achieving the requirements of paragraphs 515(b)(5) and (6) of the Act, as well as certain of the provisions relating to revegetation, protection of the hydrologic balance, minimization of air pollution and prompt reclamation. These Sections require that persons conducting surface mining activities remove topsoil or other approved plant growth material prior to operations, save it for later use in a manner conducive to protecting the primary root medium from contamination and erosion and redistribute it in a manner which will enhance its productivity. Systematic handling and storage practices can protect the soils physical and chemical characteristics necessary to sustain vegetation while it is in storage and after it has been redistributed onto the regraded area. These proposed regulations are intended to minimize water pollution and provide a medium for plant growth capable of returning mined land to a condition and/or use equal to or higher than that prior to mining.

Authority for these regulations is contained in Sections 102, 201, 501, 503, 504, 507, 508, and 515 of the Act.

The technical literature used in preparing Sections 816.21–816.25 includes:

1. Aldon, Earl F., *Reclamation of coal-mined land in the Southwest,* Jour. of Soil and Water Cons., Vol. 33, No. 2, 1978, pp. 75–79.

2. Baker, James B. and W. M. Broodfoot, *Site Evaluation for Light Important Southern Hardwoods,* U.S.D.A., Forest Service General Technical Report 80–14, 1977.

3. Carmen, Willard H., *Forest Site Quality Evaluation in the United States,* Advances in Agronomy, Vol. 27, pp. 225–226, Academic Press, Inc., 1975, pp. 225–226.

4. Colorado, Rules and Regulations of the Land Reclamation Board.

5. Lull, Howard, W., U.S.D.A., Forest Service, Misc. Pub. No. 768, 1959.

6. McCormack, Donald E., *Soil Reconstruction: Selecting Materials for Placement in Mine Reclamation,* Mining Congress Journal, 1976.

7. McCormack, Donald E., *Research and Applied Technology Symposium,* 2d, Oct. 22–24, 1974, Louisville, KY.

8. Montana, Rules and Regulations adapted pursuant to Title 50, Chapter 10, R.C.M. 1947.

9. Plass, William T., *Reclamation of Coal-Mined Land in Appalachia,* Jour. of Soil and Water Cons., Vol. 33, No. 2, 1978, pp. 56–61.

10. Power, J. F., R. E. Ries, and F. M. Sandoval, *Reclamation of Coal-Mined Land in the Northern Great Plains,* Jour. of Soil and Water Cons., Vol. 33, No. 2, 1978, pp. 69–74.

11. United States Department of Agriculture Soil Conservation Service, *Soil Taxonomy,* Agricultural Handbook No. 436, and United States Department of Agriculture, Soil Conservation Service, Agriculture Handbook No. 18.

Sections 816.21–816.25, propose procedures to be followed by the permittee to preserve the chemical and physical properties of the soil, reconstruct the disturbed area, and restore the productive capacity of the disturbed area.

Plass, 1978, p. 57, states that "Reclamation begins with an evaluation of the overburden." Powers, et al., 1978, p. 73, write that, "Many reclamation problems can be solved by covering undesirable spoils with good soil." Yields of several crops as affected by thickness of subsoil and topsoil spread over sodic (SAR=26) mine soils are illustrated by Plass, 1978, Table 6, p. 72. McCormack, 1976, p. 19, wrote that, "Burying the A and B horizons under many feet of spoil during the surface mining operation is certainly not compatible with full restoration of productive potential."

Planning, prior to handling and placement of overburden materials, may facilitate disposal of large rocks and toxic substances. The objectionable materials should be carefully buried, while materials suitable for use in the re-establishment of vegetative cover should be properly placed on the area to be restored or segregated for later use. It is important to control the material placed on the surface to serve as the growth medium if the disturbed area is to be successfully revegetated in accordance with proposed Sections 816.111–816.117.

The requirements of proposed Section 816.22 are essential for reconstructing a plant growth medium, soil, that will create the most favorable qualities for plant growth.

Six inches of soil is thought to be a minimum practical depth necessary for root development and essential for the land to be restored to a condition at least capable of supporting its premining use.

Soil profiles vary widely in thickness, from mere films to those many feet thick, and deep layers, say to 6 feet, may need to be examined because of their importance to drainage, etc. (Agriculture Handbook No. 18, p. 174.) Also, plant roots require soil horizons that are able to supply adequate water, air and nutrients (Agriculture Handbook No. 18, p. 249). Thus, the friable nature of the A horizons causes them to be the most favorable material for seed beds among existing materials at most sites.

McCormack, 1976, stated, "In most areas, the A horizon of the natural soil is vastly superior to any underlying soil horizon or geologic strata. Even if it is only 3 or 4 inches thick, careful handling and return of this horizon to the surface is required for most successful reclamation. The soil survey indicates the thickness of the A horizon and properties that are important to reclamation, including texture, structure, organic matter content and pH." To mix the various soil horizon during removal could be counter productive to restoration of the distrubed area to a level at least equal to the premining capability.

The regulatory authority, might require removal and separation of the B horizon or portions of the C horizon or other substrata if necessary to obtain soil productivity.

Plass, 1978, p. 57, states that proper topsoiling may involve the removal and storage of the A, B and C horizons. McCormack, 1976, p. 19, states that "Instances where the geological strata is better suited for the productive growth of plants, although uncommon, do exist in a few areas and should be recognized before final plans for excavating and regrading are made." Similarly, the Montana Rules and Regulations (Sections 26-2.10(10)-s10280(8)(d) and 26-1.10(10)s10340(s) provide for the use of plant growth materials, other than topsoil, when those materials are determined superior in production potential to the topsoil of a disturbed area.

Agriculture Handbook No. 18 states on page 250 that "Some plant roots penetrate to much greater depths than commonly believed." Also, McCormack, 1976, wrote, "Most A horizons are less than 10 inches thick—too thin for a favorable root zone for most plants. Other favorable material must be placed below the A horizon in order to create a favorable root zone several feet in thickness." In most areas the B horizon is more satisfactory in the root zone than is material from geologic strata but McCormack says these materials need evaluation and the one most suited to restoring production should be chosen. The lower horizons ordinarily possess qualities that are less favorable for plant growth. Thus, to mix these materials will ordinarily lessen the productive potential. However, mixing or the use of substitute material would be authorized under Section 816.22 when these practices can be advantageous to the establishment of permanent vegetation and restoring the disturbed area to the premining production potential.

The mixing of topsoil and selected overburden is an acceptable practice when the mixture produces a soil medium more suitable for land use capability and productivity than topsoil. Alternative strata may be used as a growth medium when topsoil is either of inadequate quality or quantity.

Colorado and Montana, in their regulations, recognize the importance, under certain conditions, of providing for the use of overburden other than topsoil. While McCormack states that vertical sections above coal formations generally are widely varied in their suitability for covering a disturbed area, he goes on to state that, "Instances where the geological strata are better suited for the productive growth of plants, although uncommon, do exist in a few areas and should be recognized before final plans for excavating and regrading are made."

All determinations of suitability of various horizons and their appropriate handling ought to be based on previously performed analyses and adequate field trials.

Proposed Section 816.23 is intended to protect the physical and chemical qualities of topsoil while that material is being stored. Plass, 1978, p. 57, writes that "planned placement may segregate material suitable for revegetation," and McCormack, 1976, states that burying the A and B horizons under many feet of spoil during the

surface mining operation is certainly not compatible with full restoration of productive potentials.

Under Section 816.24, compaction that restricts root penetration must be avoided during topsoil redistribution since closely packed soil can be relatively impermeable. Scarification of regraded land before the topsoil is replaced is generally the most effective treatment to prevent slippage. The regulations do not make it a mandatory practice. However, measures necessary to eliminate slippage must be undertaken in all cases.

McCormack, 1976, wrote that "of greater importance than any other factor in achieving successful reclamation of surface mined land is the nature of the soil left at the surface after mining. The nature of this soil determines the choices available for plant species." McCormack goes on to say "soils should be reconstructed so as to have a sequence of horizons chosen from the best available soils and geologic strata. This will create the most favorable qualities for plant growth." The topsoil must be uniformly redistributed in a manner that assures placement and compaction compatible with the needs of the species that will be used to restore the disturbed area to its premined potential. The placement of toxic materials on or near the surface will severely restrict the productive capacity of the area.

Lull, 1959, p. 27, found that soil compaction drastically reduced the pore space through which water moves in the soil, thereby reducing infiltration and percolation, increasing runoff, and encouraging erosion. Baker, 1977, said the growth of hardwoods depends on the following soil factors:

(a) Soil physical condition

(b) Moisture availability during growing season

(c) Nutrients available

(d) Aeration.

These same factors must be considered so that the redistributed soil layers will support the vegetation required under Section 816.111-816.117.

Like Section 816.22, Section 816.25 would provide for utilization of the results of soil tests, trials, analyses and surveys required by Sections 779.21 and 779.26 of these proposed regulations. The availability of mineral elements essential to plant growth varies considerably in strata of the overburden. This wide variation in available plant nutrients makes it advisable to sample the surface material to determine if the proposed land use and vegetative plan is feasible. If the strata of the overburden contains good supplies of mineral nutrients, these materials if properly used on the mined and graded lands will provide adequate nutrients. However, some soil materials will require the addition of amendments to establish vegetation that can be sustained on the disturbed area.

§§ 816.31-816.38 Roads and other transportation facilities.

These proposed Sections pertain to the location, construction, drainage and restoration of mine access and haul roads and other transportation facilities such as railroad loops, spurs and sidings. The standards set forth in these Sections are intended to ensure the minimization of the adverse effects to hydrology, fish and wildlife and their habitats, and public and private property as a result of the construction and utilization of mine roads.

The authority to establish these performance standards is found in Sections 102, 201, 501, 503, 504, and 515 of the Act.

The literature, State laws and regulations, and other materials used in preparing these regulations include the following in addition to those works cited in the Preamble sections below which discuss proposed Sections 816.41-816.57:

1. Mudd, S.W., 1968, *Surface Mining,* American Institute of Mining Metallurgical and Petroleum Engineers, New York, N.Y.

2. Parker, P.E., 1965, *Criteria for Designing and Locating Logging Roads to Control Sediment,* Intermountain Forest and Range Experiment Station, U.S. Forest Service, Ogden, Utah.

3. U.S. Department of Agriculture, 1977, *Forest Service General Provisions and Standard Specifications for Construction of Roads and Bridges*

4. U.S. Department of Interior, Bureau of Mines, 1977, *Design of Surface Mine Haulage Roads Manual,* Information Circular 8758.

5. Weigle, W.K., 1965, *Designing Coal Haul Roads for Good Drainage,* U.S. Forest Service, Central States Forest Experiment Station, Berea, Kentucky.

6. West Virginia Department of Natural Resources, Division of Reclamation, (no date), *Drainage Handbook for Surface Mining,* (Revised 1-1-75).

Coal mine access and haul roads were identified in the 1950's and 1960's as being responsible for much of the watershed disturbance associated with surface mining operations. Abandoned roads associated with surface mining contribute substantially to stream sedimentation thus affecting the water quality of streams flowing from mined watersheds. In order to control or substantially reduce these adverse impacts, criteria are required to ensure the proper design, construction, maintanance, and reclamation of roads and other transportation facilities associated with surface mining operations. Although the Office recognizes that there may be objections to specific design criteria as being unnecessary, the criteria being proposed today are in fact necessary since effluent limitations will not apply to all roads. Design and construction specifications will ensure control of erosion and pollution and successful reclamation. Many of the criteria in these proposed Sections are drawn from interim program regulations. 30 CFR 715.17(l)-(m) 42 Fed. Reg. 62688 (December 13, 1977).

In developing these regulations, considerable thought was given to the cost involved to the mine operator. While additional costs will be incurred by the operator under these regulations, some of these costs will be offset by longer equipment life, lower equipment maintenance, higher productivity, lower "lost time" and increased safety.

Paragraph 515(b)(4) of the Act is specific in requiring the operator to conduct operations in a manner to stabilize surface areas to effectively control erosion. Also, paragraph 515(b)(10)(B)(i) of the Act requires the operator to conduct surface coal mining operations in a manner to control or prevent additional contributions of suspended solids to streamflow, or runoff outside the permit area, using the best technology currently available. Accordingly, the proposed rules require that mine access and haul roads shall be located, insofar as possible, on ridges or on available flat and stable slopes, to minimize disturbance to the hydrologic balance. In addition, mine roads may not be located in perennial streams (paragraph 515(b)(18) of the Act). Stream fords are prohibited (paragraph 515(b)(17) of the Act) unless specifically approved by the regulatory authority.

Certain design, construction, and maintenance criteria have been provided in these proposed regulations that will assure that mine roads will comply with paragraph 515(b)(10) of the Act. Guidelines for developing these criteria can be found in sources such as laws and regulations currently mandated by most mining states, design and construction criteria for developing logging roads on National Forest lands and in the road construction standards set forth by the American Association of State Highway and Transportation Officials (AASHTO) for State, Federal and county highways. The standards set by AASHTO were developed to apply for the most part to relatively high speed roads with vehicle design speeds of 35 miles per hour or more which are public requiring asphaltic or concrete surfacing.

In the past, the AASHTO standards have not generally been applied to

mine access or haul roads that connect from the mine site to a public road or highway. The Office believes that the cost of construction and subsequent reclamation of such roads is not warranted. Adequate environmental and safety protection can be provided for most mine roads by the less stringent standards in the proposed regulations. Some criteria for designing and locating logging roads on National Forest lands are appropriate for mine roads, and these have been adopted for grade, drainage and surfacing requirements. Generally these roads are constructed and designed to meet the environmental conditions in the western States where most of the timber harvesting on National Forest lands occurs. In addition to logging roads standards, much reliance was placed on current State laws and regulations that govern mine access and haul roads.

There are a few coal mining States that allow grades of 20 percent or more for mine roads. The majority of the States, however, have established 15 percent as the maximum grade (Bureau of Mines, 1977). West Virginia does not allow mine haulageways having sustained grades exceeding 10 percent, with maximum grade not to exceed 15 percent for 300 feet. These basically are the gradient requirements for mine roads adopted in proposed Section 816.34.

Many of the requirements of these Sections are based on considerations in technical literature cited in the portions of the Preamble relating to proposed Sections 816.41-816.57. The reader is referred to those portions of the Preamble for further discussions of the hydrologic considerations which led to proposed Sections 816.31-816.38.

Proposed subparagraph 816.32(b)(3)(vi) requires that each layer of embankment material be compacted to achieve a density determined in accordance with American Association of State Highway and Transportation Officials (AASHTO) standard method T 99-74. Although this subsection as proposed, applies to roads that are to remain in place and use for more than 5 years, the Office recognizes that some might consider it too restrictive. For instance, should T 99-74 be applicable to embankment material consisting of rock, broken stone, or fragmented material of such size as to render the placing of 12-inch layers impractical and is the limited variance available under Subparagraph (b)(iv) adequate? The Office solicits comments on alternative methods for determining the desired compaction of embankment layers. Similar comments are solicited for alternative procedures to proposed subparagraph 816.32(b)(2)(vii) relating to moisture content of embankment material.

Under Section 816.34 of the proposed regulations the design and construction criteria for all but the most temporary mine roads require that ditches, cross drains and ditch relief drains be based on a discharge capacity capable of passing the peak runoff from a 10-year 24-hour precipitation event.

The Office recognizes that there are non-complying haul roads and access roads and other transportation facilities. Many of these haul and access roads and other transportation facilities were designed and constructed prior to enactment of the Surface Mining Control and Reclamation Act of 1977. They may not comply with the grade or location requirements, ditching, culvert, or road surfacing standards, or stream crossing or embankment provisions of the proposed permanent regulatory program.

Public comment is solicited as to the extent, if any, it is appropriate that these pre-existing, nonconforming mine roads and other transportation facilities not be required to be reconstructed to meet the design criteria of the regulations. An alternative considered was requiring additional drainage structures for pre-existing roads such as ditches, crossdrains or ditch relief dams in areas of excessive erosion, siltation or sedimentation outside the permit area. Placement of the drainage structures should not cause any major change in the vertical or horizontal alignment of the roads or other transportation facilities. The Office believes that non-complying roads should not be exempt from the provisions of proposed Section 816.38 Restoration of Roads. However, it may be appropriate for the regulatory authority to provide variances for the reclamation of pre-existing roads in areas where fill material is not available for backfilling to original contour or topsoil to meet the standards is not available because they have not been planned for during the design stages of the mine road or other transportation facilities.

§ 816.39 Support facilities and Utility Installation.

Proposed Section 816.39 pertains to facilities that support the mining operation or other public facilities such as pipelines which cross the mining operation.

Authority for proposed Section 816.39 derives from Sections 102, 201, 501, 503, 504, 515, and 701 of the Act.

Public comment is elicited as to whether there are any particular environmental or other risks from the manner in which these facilities are constructed or utilized at minesites which would be the basis for additional specific standards. At this time, the Office believes the general language of this proposed Section will provide adequate basis for meaningful regulatory authority review of plans for the facilities, and for enforcement actions which result in furthering the environmental and other goals of the Act.

§ 816.41-816.57 Hydrologic Balance.

These proposed Sections would require that surface coal mining and reclamation operations be planned and conducted so as to minimize disturbance to the prevailing hydrologic balance. The purpose of these requirements is to ensure that both long-term and short-term adverse changes in the hydrologic balance that could be caused by mining and reclamation activities will be prevented or minimized.

The authority for these Sections is set forth in the Act at Sections 102, 201, 501, 503, 504, 507, 508, 510, 515, 517, 519, 701, and 717.

The literature used in writing the performance standards to protect the hydrologic balance includes, in addition to other works cited within the preamble text:

1. Agricultural Research Service, *"A Universal Equation for Predicting Rain-Fall Erosion Losses"* USDA, ARS Special Report 22-66, March 1961.

2. Appalachian Regional commission, *Surface Mine Pollution Abatement and Land Use Impact Investigation Report* ARC 71-66-T2, Vol. II, pp. 82-238, Eastern Kentucky University, Richmond, Kentucky, 1975.

3. Bennett, Melvin W., and Wilson, Dale, 1975, *Clearwater National Forest—watershed analysis procedure:* U.S. Department of Agriculture, Forest Service, Clearwater National Forest, Idaho.

4. Benoit, Clifford, 1975, *Hydrologic characteristics of the Colville National Forest—hydrologic and meteorological relationships,* U.S. Department of Agriculture, Forest Service, Colville National Forest, Washington, 38 p.

5. Biesecker, J. E., and George, J. R., 1966. *Stream Quality in Appalachia As Related to Coal-Mine Drainage,* 1965. Geological Survey Circular 526 USDOI Geological Survey, Washington, DC.

6. Bhutani, J. et al., 1975, *Impact of Hydrologic Modifications on Water Quality.* EPA-600/2-75-007 Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC 20460.

7. Boyson, S. M. *"A Procedure for Estimating Urban Sediment Yield."* Paper presented 1975 Winter Meeting American Society of Agricultural Engineers. Paper No. 75-2545.

8. Boyson, S. M. *"Erosion and Sediment Control in Urbanizing Areas,"* "Proceedings—Planning and Design for Urban Runoff and Sediment Management." University of Kentucky, Lexington, 1973. pp. 24-29.

9. Brakey, S. A., "Acid Mine Drainage: Problem," *Mechanization,* Vol. 18, pp. 87-89, 1954.

10. Brune, G. M. *"Trap Efficiency of Reservoirs."* Transactions, American Geophysical Union, Vol. 34, No. 3, June 1953.

11. Brackenrich, J. D., 1974, *Design criteria of sediment control structures in Appalachia: American Society of Agricultural Engineers,* Winter Meeting, Dec. 10-13, 1974, Chicago, Ill., Paper No. 74-2569, 63 p.

12. Camp, Thomas R., *"Sedimentation and the Design of Settling Tanks,"* American Society of Civil Engineers Transaction, Paper No. 2285, April 1945. pp. 895-958.

13. Chow, C., 1975, *Design of Sediment Retention Basins,* Proc. National Symposium on Urban Hydrology and Sediment Control, University of Kentucky, Lexington, Kentucky, July pp. 28-31.

14. Code of Federal Regulations—Mineral Resources—Mining Enforcement and Safety Administration (MESA) now Mine Safety and Health Administration (MSHA) 30 CFR 77.216(a).

15. Code of Federal Regulations—Mineral Resources—Mining Enforcement and Safety Administration (MESA) now Mine Safety and Health Administration (MSHA) 30 CFR 77.216-3.

16. Collier, C. R., Pickering, R. J., and Mosser, J. J., 1970, *Influences of Strip Mining on the Hydrologic Environment of Parts of Beaver Creek Basin,* Kentucky 1955-66, U.S. Geological Survey Prof. Paper 427-C, 80 p.

17. Curtis, D. C., 1976, *A Deterministic Urban Storm Water and Sediment Discharge Model,* Proc. National Symposium on Urban Hydrology and Sediment Control, University of Kentucky, Lexington, Kentucky, July 27-29.

18. Curtis, Willie R., 1971(a), *Strip Mining Erosion and Sedimentation,* American Society of Agr. Engineers, Trans. Vol. 14, No. 3, pp. 434-436.

19. Curtis, Willie R., 1971(b), *Terraces reduce runoff and erosion on surface-mine benches:* Soil and Water Conservation Journal, Vol. 26, No. 5, Sept.-Oct. 1971, 2 p.

20. Curtis, Willie R., 1971(a), *Vegetating strip-mine spoils for runoff and erosion control, in Revegetation and Economic Use of Surface-Mined Land and Mine Refuse Symposium,* Dec. 2-4, 1971, Pipestem State Park, W.Va., Proceedings, p. 40-41.

21. Curtis, Willie R., 1972(a), *Chemical changes in streamflow following surface mining in eastern Kentucky:* U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station, 13 p. (paper presented at 4th Symposium on Coal Mine Drainage Research, April 26-27, 1972, Mellon Institute, Pittsburgh, Pa. pp. 19-311).

22. Curtis, Willie R., 1972(b), *Strip-mining increases flood potential of mountain watershed, in National Symposium on Watersheds in Transition,* June 19-22, 1972, Fort Collins, Colo., Proceedings, pp. 357-360: American Water Resources Association and Colorado State University.

23. Curtis, Willie R., 1973(a), *Effects of strip mining on the hydrology of small mountain watersheds in Appalachia,* Paper II-2, in Hutnik, R. J., and Davis, Grant, eds., Ecology and reclamation of devastated land, Vol. 1: New York, Gordon and Breach, pp. 145-157.

24. Curtis, Willie R., 1974, *Sediment yield from strip-mined watersheds in eastern Kentucky,* in 2d Research and Applied Technology Symposium on Mined Land Reclamation, proceedings of Coal and the Environment Technical Conference, Oct. 22-24, 1974, Louisville, Ky.: Washington, D.C., National Coal Association, p. 88-100.

25. Curtis, Willie R., 1977, *Surface mining and the flood of April, 1977:* U.S. Department of Agriculture, Forest Service Research Note NE-248, 4 p. (Northeastern Forest Experiment Station, Upper Darby, Pa.)

26. Czapowskyj, Miroslaw M., 1976, *Annotated bibliography on the ecology and reclamation of drastically disturbed areas,* U.S. Department of Agriculture, Forest Service General Technical Report NE-21, 98 p. (Northeastern Forest Experiment Station, Upper Darby, Pa.)

27. Davis, Grant, 1967, *Hydrology contour strip mines in the Appalachian region of the United States,* in 14th Congress, International Union of Forest Research Organizations, August 1967, Munich, Germany: Proceedings, sec. 11, p. 420-443.

28. Delk, Robert, 1963, *Probable hydrological effects of clear-cutting on the Flathead National Forest—vegetation manipulation guidelines:* U.S. Department of Agriculture, Forest Service, Flathead National Forest, Montana, 65 p.

29. Dick, R. I., *Forklore in the Design of Final Settling Tanks.* Journal Water Pollution Control Federation, Vol. 48, No. 4, pp. 633-644, 1976.

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Proposed section 816.41 sets forth in general terms the hydrologic requirements for surface mining activities. In light of the testimony presented before Congress during deliberations over the Act, the requirements of the Act and State regulations on the subject, details are provided which are believed to be sufficient to ensure that all surface coal mining and reclamation operations are conducted in an environmentally acceptable manner. The process of surface mining involves a number of changes in land cover, drainage pattern, and nature of the overburden that may markedly alter the hydrology of an area.

Past studies have documented changes in flooding, base flows, sedimentation and water quality in streams draining mined watersheds (Curtis 1972 (a), (b), 1973, 1974, Davis 1967, Gilley et al. 1977, Plass 1975, Simpson 1972). In addition, potential impacts can occur to the groundwater resource and in downstream channel—forming processes although these latter changes are less easily documented and usually become a consideration only when relatively larger areas are mined. These various impacts result because interruptions in one or more components of the hydrologic cycle of an area often affect other components in the system (Gregory and Walling, 1973). For example, the changes in water yield associated with forest cutting can result in stream channel instability problems (Galbraith 1973). Therefore, it is important that the hydrologic balance of an area to be mined be altered as little as possible as a result of surface mining.

The proposed regulations are structured on the premise that the permittee must research and understand the hydrologic balance in the affected area as well as understand the affect of mining on that balance so that operations are planned and conducted to minimize disturbances both on-site and off-site. Since the hydrologic balance may be restored only after long periods of time, it is necessary for the permittee to project long-term implications of the mining.

Proposed Section 816.42 contains minimum water quality standards and effluent limitations which would be required by the Office if the Section is adopted.

In developing these standards, an alternative considered by the drafters in response to public comment was to do no more than incorporate by the reference EPA's Effluent Guidelines and Standards for the Coal Mining Point Source Category under the National Pollution Discharge Elimination System permits program. This alternative was analyzed and rejected for several reasons.

First, the proposed effluent limitations would be applied throughout the entire phase of surface coal mining and reclamation operations, as required for the protection for the hydrologic balance by Section 515 (b)(10) of the Act, whereas EPA's effluent limitations regulations apply only to the active phase of mining operations. The extension of effluent limitations

to discharges from areas disturbed by mining after final grading or active final operations of an underground mine is necessary to ensure protection of the hydrologic balance, including the quality and quantity of surface water, until reclamation is completed. There is no basis in the Act to distinguish between phases in the mining and reclamation operations for the purpose of justifying less stringent requirements.

The effluent limitations proposed would apply to all surface mining operations conducted within "disturbed areas," until such time as the requirements of the Act are met for achieving successful reclamation. Severe water pollution effects occur as a result of discharges from mining operations after the active phase of mining. Therefore, the Office believes that protection of the environment would be significantly impaired by mere adoption of the EPA effluent limitations regulations.

A second reason why this alternatve is not being adopted, is that U.S. EPA's regulations apply only to existing point source discharges of water from mining operations and do not apply to non-point source discharges. Section 515(b)(10) of the Act, however, requires that all impacts resulting from mining on the hydrologic balance be regulated. As was noted by the United States District Court for the District of Columbia in consideration of the interim regulations under the Act, regulation of non-point source pollutional discharges from surface coal mining and reclamation operations is needed under the Act. *Surface Coal Mining Regulation Litigation* ——— F. Supp. ——— (MEM. OP. at 14-15) (D.D.C., 1978). The Office's proposed effluent limitations would apply to non-point source discharges, and provide substantial protection to hydrologic balance on a national basis which would not be afforded by mere adoption of the EPA's effluent limitations regulations.

The third reason why use of the EPA regulations alone is believed to be insufficient in that these regulations do not apply at all to discharges of groundwater. Therefore, the use of those regulations would have major adverse environmental impact as compared to the effluent limitations proposed for adoption by the Office.

A second alternative to the Office's proposed effluent limitations regulations suggested by a commenter was that, rather than specifying effluent limitations based upon total suspended solid discharges of 35 milligrams per liter daily maximum, 70 milligrams per liter daily average on a uniform minimum national base, the Office propose regulations which would establish suspended solid limitations upon the basis of actual impact of each discharge in increasing suspended solid loads on the particular receiving surface waters. This proposal would require that, as to each discharge from mining, a baseline be established on the levels of total suspended solids in the receiving waters above the point of a discharge and limitations be established so as not to allow for loads to "significantly impact" upon receiving waters. Upon consideration, the Office has decided not to adopt this alternative for two reasons.

First, the EPA effluent limitations regulations require for coal mining that discharges be limited on a uniform national basis to not greater than 35 milligrams per liter daily maximum, 70 milligrams per liter daily average for total suspended solids. Under Section 702(a) of the Act, the Office must adopt regulations at least as stringent as those promulgated by EPA. Therefore, the Office does not believe it has legal authority to adopt this proposed alternative. Second, Section 515(b)(10) of the Act requires that discharges of suspended solids from areas disturbed by mining operations be limited by the use of the "best technology currently available." The effluent limitation for total suspended solids under the proposed regulations represent the "best technology currently available," for controlling suspended solids. Establishing effluent limitations merely upon the basis of the quantities of sediment in receiving waters would not represent the use of the "best technology currently available." This represents another basis on which the Office believes it lacks the legal authority to adopt the proposed alternative.

The Surface Mining Control and Reclamation Act of 1977 is broadly intended to protect society and the environment from the adverse effects of coal mining while EPA's effluent guidelines are based on technological capabilities of the industry for protection of water quality and ecology. Consequently, to meet the requirements of the Act to minimize disturbances to the prevailing hydrologic balance, these proposed regulations incorporate those effluent limitations currently promulgated by the EPA, establish maximum limitations for suspended solids for the West, require representative sampling for determining compliance with limitations and identify specific minesite development requirements. Thus, compliance with the proposed regulations should minimize water quality and ecological impacts previously documented. (Curtis, 1973; Curtis, 1974; Dyer and Curtis, 1977; Simpson, 1977; USDA, 1973; USFS, 1972; Gruble and Ryder, 1972; USDOI, 1967; Brayley, 1954; Striffler, 1973; Turner, 1958; Kinney, 1964; Warner, 1973.)

The Office has, in the past, discussed the pertinent regulations and statutes with the EPA and has received that Agency's written concurrence to identical requirements to these regulations as they relate to water quality standards. Both agencies will strive to minimize duplicative efforts in standard setting, permit issuance, monitoring requirements, inspections, and enforcement. The Office notes that EPA has proposed standards of performance for new sources in the coal mining point source category. 42 FR 46932 (Sept. 19, 1977). When EPA adopts final regulations, the Office will incorporate regulations which are at least as stringent.

Operations in compliance with the requirements of an NPDES permit should have little difficulty in complying with the effluent limitations and monitoring requirements of these proposed regulations. The Office's limitations on suspended solids for mines located in the Western states are expected to result in limitations identical to NPDES limitations.

One footnote in the proposed table for effluent limitations makes clear the intent to allow permittees to raise the pH of certain discharges to facilitate meeting the manganese standards. Since the higher pH should be quickly reduced by receiving waters, there should be no adverse impact upon water uses. If this practice is found to have adverse impacts on water quality the standard will be changed.

The regulations would require application of the effluent limitations only to discharges from the disturbed areas and not to discharges from areas the permittee has not disturbed through mining and reclamation. The term "disturbed area" has been carefully defined to exclude areas in which the disturbance is limited to diversion ditches, sedimentation ponds, or access and haul roads when they are constructed, operated, and maintained in accordance with these regulations. These areas have been excluded because installation of treatment facilities necessary to ensure compliance with effluent limitations is not considered by the Office to be cost effective for this type of installation. However, the operator must ensure that runoff and discharges from these areas do not result in degradation of water quality in receiving streams to the extent that applicable water quality standards are violated. Compliance with the requirements for construction, operation, and maintenance of the structures located in these areas should minimize the affects on water quality. If necessary, however, the Office will promulgate more stringent

limitations and requirements in the future to protect water quality.

The extension of effluent limitations to discharges from disturbed areas after final grading is necessary to ensure protection of the hydrologic balance, including the quality and quantity of surface water, until reclamation is completed. However, compliance with the reclamation standards specified in the proposed rules should preclude problems in meeting the effluent limitations during the reclamation period.

Moreover, various State regulatory agencies extend effluent limitations to discharges from lands that have been regarded and planted but which had not yet been released from bond obligations or other permit requirements. It was found that States extend effluent limitations or water quality criteria to all phases of coal mining and reclamation operations. The termination of such requirements is normally tied to release of further permittee responsibility for mining and reclamation and this is often at the time of final bond release. In keeping with this practice, the Office proposes that effluent limitations apply to all surface mining operations conducted within "disturbed areas" until such time as the requirements of this Chapter are met for achieving successful reclamation.

The greater restriction in footnote 3 on total suspended solids in the interior western United States is necessary to minimize disturbances to the hydrologic balance in areas where erosion is extensive, water quality is critical, and soils are irreplaceable. Benoit, 1975; Dollhoph, et al., 1977; Dyer and Curtis, 1977; Gilley, et al., 1977; McWorter, et al., (no date); and Rahn, 1976.

Under proposed Section 816.42, the permittee would be required to install and operate an automatic lime feeder or other acid neutralization facility where the pH of waters discharged from areas disturbed by mining is normally less than 6.0. An exemption, however, would be provided in the proposed regulations for small mines producing less than 500 tons of coal per day so that the regulatory authority could approve of the use of a manual neutralization device, if treatment requirements were small and infrequent. One comment received by the Office proposed that this exemption be eliminated, so that automatic lime treatment or other neutralization devices be used on all effluent discharges with a pH of less than 6.0. Upon analysis of this alternative the Office has decided not to adopt it. Requiring the use of an automatic neutralizing device when, for the small mines involved, manual treatment is sufficient would be an added burden upon the operators of those mines, with negligible additional environmental benefit.

Proposed Section 816.43 provides for protection of the hydrologic balance of the mining area by proposing standards for the diversion and conveyance of surface flow and shallow ground water flow. Diversions represent an important environmental tool. Diversions may not be required in all cases—they will be required where necessary to prevent or minimize water pollution.

The terms "peak runoff" and "recurrence interval" are used as opposed to specifying a time period, since the intent is to design the diversion channels to pass safely maximum runoff rates that may occur in the region. These may vary, for example, from a 6-hour storm in one area to a 24-hour storm in another. It would be necessary for a permittee to identify the peak runoff expected in a 3-year and 10-year period either from extrapolation of flow records or by determining storm rainfall for the appropriate recurrence interval and estimating runoff using accepted methods such as those in USSCS, 1960; USDA, 1961. The periods and recurrence intervals proposed differ from those promulgated in the interim program as a result of comments received by the Office concerning the long record of safe diversion construction of the Soil Conservation Service using the 3- and 10-year recurrence intervals. Some commenters suggested using no fixed recurrence interval for temporary diversions, but this suggestion was rejected as not offering enough specific environmental protection to meet the requirements of Sections 515 and 508 of the Act. The permittee would not be expected to divert flows which exceed the design storm.

Temporary diversions are preferable to permanent diversions in the vast majority of cases; thus, permanent diversions must be approved by the regulatory authority. The intent of the requirement in subsection 816.43(b) remains to minimize additional contributions of suspended sediment to the surface water system.

Alternatives were considered for designing permanent diversions and conveyances of overland flow and shallow ground water flow. The selected criterion specifies using a 10-year recurrence interval storm along with a freeboard based on the formula $F=1+(0.025 \times v \times d)$ unless the regulatory authority specifies a larger storm. This was selected because the Office believes it affords a reasonable degree of environmental protection without undue overdesign. One alternative considered would have required designing permanent diversions for storms with a 100-year recurrence interval, or larger if specified by the regulatory authority.

Additional alternative storm recurrence intervals considered for the design of temporary nonstream diversions included: 10-year, 5-year, 3-year, and 1-year 24-hour rainfall events.

Proposed Section 816.44 is based in large part on Galbraith, 1973 and Pfankuch, 1975. The terms "peak runoff" and "recurrence interval" are used instead of specifying a time period, since the intent is to design the diversion channels to safely pass maximum runoff amounts that may occur in a region. The 10-year and 100-year intervals are used for design, since the 10-year limit is consistent with general practice and affords an effective level of environmental protection for temporary structures and the 100-year period is generally accepted as a basis for design of intermittent and small perennial streams. Illinois Department of Mines and Minerals, 1976, and U.S. SCS, 1971. It will be necessary for a permittee to identify the peak runoff expected in a 10-year and 100-year period either from extrapolation of flow records or by determining rainfall for the appropriate recurrence interval and estimating runoff using accepted procedures, such as those found in USSCS, 1960, or USDC, 1961.

The alternatives considered for the design of permanent and temporary stream channel diversions were the same as considered for overland flow diversions, and the reader is referred to the portions of this Preamble which discussed proposed Section 816.43 (Diversions and conveyances of overland flow and shallow groundwater flows).

Proposed Section 816.45 focuses on the erosion and sediment control measures that are used in conjunction with sedimentation ponds covered in Section 816.46. The emphasis in planning mining operations should be on controlling erosion to minimize the sediment that is received downstream. These erosion and sediment control measures are the basis for establishing credits to be used in reducing the volume of sediment storage that will be needed in the sediment ponds.

Disturbed areas are most vulnerable to erosion when the surface is bare. Erosion can be minimized when this exposure is kept to the shortest practical time and, where practicable, earthwork activities such as diversions and pond construction are not conducted during wet seasons. Final dressing and grading should be done progressively and/or mulching should be done where revegetation may be delayed (U.S. EPA, 1976a). Backfill material can also be shaped to lessen overland runoff as an erosion control measure (Curtis, 1971b; Dollhopf, 1977). Chemical binders and tacks can be used effectively to stabilize bare soil areas

from erosion until vegetation is established (U.S. EPA 1976a).

Diversions to keep runoff from undisturbed areas away from disturbed areas serve to lessen the amount of sediment to be handled and the magnitude of runoff event that must be used to design sediment ponds (U.S. EPA, 1976a, U.S. SCS, 1971). A variety of detention and retention devices may be employed in the disturbed areas to reduce overland flow volumes or velocities and entrap sediment (Tryon et al. no date; U.S. EPA, 1976a; USDADSC, 1971; WVA DNR, 1975).

Section 816.47—*Sedimentation Ponds*: The Office proposes to require sedimentation ponds in conjunction with other sediment control measures as "best technology currently available" to prevent to the extent possible additional contributions of suspended solids to streamflow or runoff outside the permit area. *See* Section 515(b)(10) of the Act. It appears to be well established that sedimentation ponds used with other sediment control measures are "state of the art" for controlling sedimentation from surface coal mining operations. The Environmental Protection Agency has undertaken a number of studies to determine the best methods for controlling sediment laden flow. EPA studies have concluded that sedimentation ponds are the key to controlling sediment. According to EPA, such ponds are "the most effective structures for trapping sediment." The conventional method for controlling sediment that reaches the periphery of the mining operations is through the construction of a sediment retention pond to intercept the surface runoff before it leaves the mining site. *Erosion and Sediment Control—Surface Mining in the Eastern United States,* at 65 (1976). Another EPA study indicates sediment ponds are the last line of defense (treatment) before the water leaves the mine area. Hill, *Sedimentation Ponds—A Critical Review,* at 2 (Oct. 1976). According to one of the leading commentators in the field, sediment ponds should be located as close to the sediment source as possible and before drainageways reach the main stream. Grim and Hill, *Environmental Protection in Surface Mining of Coal,* EPA-670/2-74-093 at 103 (Oct. 1974).

Also, several States, including West Virginia, Pennsylvania, Kentucky and Montana now require sediment ponds as part of the mining operations. Hill, at 13 (1977).

Simply stated, sediment ponds are structures used to slow down water runoff in order to allow sediment particles to settle out. The ponds must provide sufficient water storage volume to detain the runoff long enough for particle settling. As the reservoir fills due to trapped sediment, the water storage capacity decreases. Therefore, additional sediment storage volume must be provided in order to prevent the total volume of the reservoir from falling below the volume required for particle settlement.

To draw down the water in the pond at a controlled rate so as to assure the required water detention time, a pipe is placed through the pond embankment. If the runoff overtops the embankment, erosion could occur which can ultimately lead to pond failure and hazards to life downstream. For this reason, sufficient discharge capacity must be provided from the pond in the form of an emergency spillway to eliminate the possibility of overtopping the embankment on rare precipitation events.

In mountainous areas several small ponds in series may be more desireable because of topographic constraints. Passing water from one pond to another can also improve detention time. Moreover, one small pond can be used to pretreat or remove the bulk of the large particles thus reducing the need to clean out a larger polishing pond. Hill, at 14 (1977).

The mechanics of sediment laden flow are complex. The major factors governing the efficiency of a sediment pond are the geometry of the basin, the inflow hydrograph, the inflow sediment graph, the outlet design, the hydraulic behavior of the flow within the basin, control devices within the basin which minimize short-circuiting, turbulence, and resuspension, the characteristics of the sediment and the settling behavior of the suspended sediment particles and the detention time. Ward, *Simulation of the Sedimentology of Sediment Dentention Basins* at 32 (1977); Oscanyan, *Design of Sediment Basins for Construction Sites* (1975).

In addition to a sediment pond, other sediment control measures which may be necessary to achieve and maintain applicable effluent limitations include the use of vegetative buffers, sediment traps, sand bags, straw bales, and log and pole structures. Grim and Hill, at 102 (1974); *Erosion and Sediment Control Surface Mining in the Eastern United States,* 60-65 (1976).

The Department proposes to allow operators and the regulatory authority to select the mix of sediment control measures to be used in conjunction with sediment ponds to achieve applicable water quality standards.

Legal Authority: Sedimentation pond design criteria are supported by Sections 102, 201(c), 501(b), 503(a) and (b), 515(b)(10), 515(b)(24) and 516 of the Act. *See also Surface Mining Regulation Litigation,* Civil Action No. 78-162 at 3 (Mem. Op. August 24, 1978).

Sediment storage volume. Subsections 816.46(b)(1) and (2) of the proposed regulations provide methods for calculating the required sediment storage capacity to store the expected sediment accumulation in the reservoir during its useful life. Two methods are used for making the computations and both are acceptable in this proposed regulation. First, the operator may use the Universal Soil Loss Equation (USLE), gully erosion rates and the appropriate sediment delivery ratios. The Universal Soil Loss Equation projects the sheet rill and gully erosion from disturbed areas as a function of rainfall energy, soil erodibility characteristics, length and steepness of slope, and the type of cover present. Procedures for making the USLE predictions are well established and accepted by the engineering and scientific community. Meyer, *Sediment Yields from Roadsides: An Application of the Universal Soil Loss Equation,* at 289, (Dec. 1975); Boysens, *A Procedure for Estimating Urban Sediment Yield,* at 3, (Dec. 1975); Haan, *Hydrology and Sediment Control from Surface Mined Areas,* at 5.1 (1978); Wischmeir, *Predicting Rainfall Erosion Losses from Cropland East of the Rocky Mountains,* (1965); USDA, 1975, *Procedure for Computing Sheet and Rill Erosion on Project Areas,* SCS Technical Release No. 5 (Rev.); Heineman, *Volume Weight of Reservoir Sediment,* 181-197 (1962).

The sedimentation pond must be designed to store sediment volume from the drainage area to the pond for a minimum of three years. This minimum design requirement is proposed to assure that ponds have sufficient sediment capacity to last the duration of the surface coal mining and reclamation operation. Hill, *Sedimentation Ponds—A Critical Review,* at 11 (1977). For some area mines the pond may need to collect sediment for more than 3 years. Therefore, it is expected that sediment storage volume will have to be increased to accommodate the additional sediment volume. Hill, at 11 (1977). Alternatively, adequate sediment storage volume may be maintained by more frequent removal of sediment.

The Universal Soil Loss Equation and the gully erosion rates must be used in conjunction with a delivery ratio because some of the sediment eroded from disturbed areas is deposited before reaching the reservoir by natural vegetation, stream channels, and mine pits. The gross erosion from the surface coal mining operation reduced by a delivery ratio quantifies this effect. Procedures for making these calculations are summarized in Haan, at 548 (1978); and USSCS National Engineering Handbook Section 3.

Alternatively, an operator may design the pond with a sediment storage volume of 0.1 acre-feet for each acre of disturbed area within the upstream drainage area. The basis for 0.1 acre-feet for each acre of disturbed area as an initial design requirement is a study by Curtis, *Sediment Yield from Strip mines Watersheds in Eastern Kentucky* (1974). Five settling basins were studied in Breathitt County, Kentucky, to measure the sediment yield from surface mined watersheds. Data collected included disturbed area, storage area, sediment yield, and accumulated precipitation. Based upon this data, Curtis concluded that there was little correlation between sediment yield and the amount of land disturbed during surface mining. In his view, methods of mining and handling the overburden were the major factors controlling sediment yield. Likewise, reclamation measures, including prompt revegatation, were determined to be important to minimize the sediment yield. He then concluded that the design criterion of 0.2 acre-feet for each acre of expected disturbance be retained. This recommendation was qualified, however, to the extent that mining and reclamation methods were refined and improved.

One commenter has submitted updated unpublished data collected by Curtis at the same sites between 1973 and 1977. All the data collected by Curtis is now available for public comment and analysis. The data show considerable disparity in sediment yields depending upon the type of mining operation. A 0.2 acre-feet per acre of disturbed area storage volume requirement is probably justified for operations with poor on-site mining and reclamation methods. Curtis, at 99 (1974).

Based upon this data the Department proposes 0.1 acre-feet per acre of disturbed area as a starting point for determining required storage volume for sediment ponds. If the operator utilizes on-site erosion and sediment control measures, such as prompt and progressive backfilling, prompt revegetation, adequate mulching, and sediment traps, the regulatory authority may approve a sediment storage volume not less than .035 acre-feet for each acre of disturbed area within the upstream drainage area. To obtain the reduction in sediment storage volume, the operator must show the sediment removed by other control methods is equal to the reduction in sediment storage volume. Thus, .035 acre-feet for each acre of disturbed area is proposed as a nationwide minimum sediment storage volume for sedimentation ponds. Simpson, *Westmoreland Resources, Comments on the Interim Final Rules*, (March 23, 1978); National Coal Association, *Comments and data on the proposed interim regulatory program*, Oct. 1977. Robbins, *Comments on the Interim Final Rules*, (March 15, 1978).

Detention time. The pond must also be designed to detain sediment laden water for a period of time sufficient to allow the water to come to rest and clarify itself. This pond "theoretical detention time" is defined as the average time that the design flow is detained within the sediment pond. Haan, *Hydrology and Sediment Control from Surface Mined Areas*, at 6.6 (1978).

The Department proposes that each sediment pond provide a 24-hour theoretical detention time for the water inflow or runoff entering the ponds from a ten-year 24-hour precipitation event. The design storm event is based upon EPA regulations, 42 FR 21380 and the development Document for Interim Final Effluent Limitation Guidelines and New Source Performance Standards. (1976).

The regulatory authority is to determine runoff by considering soil type, ground cover, slope, moisture conditions, and other physical characteristics. A twenty-four hour theoretical detention time is a necessary starting point to capture sediment laden flow from surface coal mining operations. It appears that trap efficiencies greater than 90 percent will be required if water quality standards are to be maintained. Ward, at 30 (1978). Studies of actual pond detention time versus theoretical detention time have shown the actual detention time to be 30 to 70 percent theoretical detention time with most ponds falling into the lower category. Hill, at 11 (1977). Assuming sedimentation ponds are approximately 50 percent efficient, to obtain 94 percent removal efficiency, 12 hours actual detention time or 24 hours theoretical detention time is necessary. Kathuria, at 56 (1976).

Sedimentation ponds designed with a 24 hour theoretical detention time are in routine use. For example, sedimentation ponds in Poland are typically designed with detention times of inflow from one to five days. A study of ponds in Poland show actual detention time to be two to four times less than the theoretical time. Janiak, *Purification of Waters from Lignite Mines*, at 59, May 1975.

The regulatory authority is authorized to approve a theoretical detention time not less than 10 hours when the person engaged in surface coal mining operations has demonstrated that the improvement in sedimentation removal efficiency is equivalent to the reduction in detention time as a result of pond design, size distribution of particles, or specific gravity of particles. The pond effluent must also be shown to achieve and maintain applicable effluent limitations. The 10 hour theoretical detention time specified is proposed as the minimum time necessary to separate by gravitational settling suspended particles that commonly occur from surface mined areas. Generally, single basins which provide an average detention time less than 10 hours, will not meet applicable effluent limitations. Hill, (1977).

The Office proposes to allow the regulatory authority to approve a theoretical detection time less than 24 hours when the person has demonstrated to the regulatory authority that chemical treatment will achieve and maintain the applicable effluent limitations; is harmless to flora and fauna; is planned under the supervision of a registered professional engineer; and the treatment facility is operated by a qualified person approved by the regulatory authority. Chemical treatment or flocculants can be applied to the water to cause the particles to come together with each other or with a heavier chemical to facilitate settling. Fine silts and clays often carry a negative charge, which causes the particles to repel each other and stay in suspension for longer times. Chemical treatment is sometimes necessary to affect negatively charged colloidal particles causing them to become attracted to each other and form larger masses which settle out. Types of coagulant include metal salts (aluminum sulfate, ferrous sulfate, feric chloride), metal hydroxides (aluminum hydroxide, calcium hydroxide), and synthetic polymers or polyelectrolytes (anionic, cationic, nonionic). Selection of the coagulant and the required dosage is an important factor in design of a chemical treatment system. *Erosion and Sediment Control—Surface Mining in the Eastern United States*, at 69 (1976).

The use of chemical flocculating agents is beginning to see more widespread use. In the past, polymer electrolytes and several other chemicals have been widely used in water treatment facilities. Flocculating agents provide an economic solution to meeting water quality goals on large surface mining areas. On three watersheds near Centralia, Washington, water quality was maintained within the applicable effluent limitations for an estimated cost of $10.00 per acre of runoff. Suppliers of chemical agents indicate they are now being widely used throughout the United States. Ward, at 24 (1978). *See also* Ward, at 59 (1977). Janiak, at 67 (1975); Kathuria, at 5 (1976). *See also* H. R. Report No. 95-218 (1977).

In the domestic water treatment field, alum and feric chloride have been used to reduce suspended sediment. In England, wire baskets filled with alum brickettes are placed in the

inflow channels leading to sedimentation ponds. Hill, at 18, 19 (1977).

Dewatering. Subsection 816.46(d) requires a non-clogging dewatering device (which can be a principal spillway) to achieve and maintain the required theoretical detention time. The dewatering device and the principal spillway are required to pass the runoff resulting from a 10 year 24 hour precipitation event without use of the emergency spillway. If the design flow passes through the emergency spillways, there is no practical way to detain it. Thus, the detention time would be inadequate. For this reason, flow through the emergency spillway is restricted to precipitation events exceeding the 10 year 24 hour event. *Erosion and Sediment Control—Surface Mining in the Eastern United States,* Vol. 2 at 55 (1976); Hill, at 17 (1977); Haan, at 6.1-6.27 (1978).

The sediment pond dewatering devices may be designed in a number of ways. One method is to place the inlet of the principal spillway (usually a pipe spillway) at the elevation of the required sediment storage. A second method would be to place the inlet elevation of the principal spillway at an elevation above the required sediment storage elevation. If this latter alternative is selected, sediment cleanout would not be necessary when sediment accumulates to 60 percent of the required sediment volume. However, the reduction in settling storage must not reduce the actual detention time below the theoretical detention time.

Short-circuiting. To assure that actual detention time approaches theoretical detention time, the Department proposes that sedimentation ponds shall be designed, constructed and maintained to prevent short circuiting. Short circuiting is caused by high velocity jet action of incoming water, wave action, inlet and outlet design. Hill, at 10 (1976). The shape of the pond has a major bearing on short circuiting of flow. Teardrop and tooth-shaped ponds usually have less short circuiting than elongated ponds perpendicular to the inlet. A long, narrow, snake-shaped pond would probably be the best shape. Hill, at 16 (1977). Methods of minimizing short circuiting include baffles, partitioning the pond into chambers, maintaining a length to width ratio of five to one, constructing an energy dissipator at the pond entrance, modifying the inflow, or adding two or more basins in series. *Erosion and Sediment Control—Surface Mining in the Eastern United States,* at 68 (1976). *See also* Ward, at 57 (1977). Janiak, at 59 (1975). Schiebe, *Control of Water Retention Time in Small Reservoirs, ASAE Meeting (1977).*

Sediment removal. Subsection 816.46(h) generally requires sediment removal when the volume of sediment accumulates to 60 percent of the required sediment storage volume. This requirement is necessary to assure that the pond has adequate sediment storage as a reserve for future precipitation events inasmuch as runoff events are not entirely predictable. Additionally, the remaining water volume (40% of required sediment volume) reduces the velocity in flows and decreases the chance for scour and resuspension of previously settled sediment. When resuspension occurs, the concentration of suspended solids in the outflow has been shown to exceed the concentration of the inflow to the pond. *Erosion and Sediment Control—Surface Mining, the Eastern United States,* Vol. 2 at 53 (1976); Hill, at 11, 13, 14 (1976); Kathuria, *Effectiveness of Surface Mine Sedimentation Ponds,* EPA-600/2-76-117 (1976); Haan, at 6.1-6.27 (1978); Oscanyan, *Design of Sediment Basins for Construction Sites* (1975).

General design requirements. A number of other standard design and construction requirements are proposed in the regulations. These include spillway design, required freeboard, allowance for settlement, minimum top width, required embankment side slopes, foundation preparation, fill materials and placing, spreading, and compaction requirements. These are general minimum requirements required in construction of similar sized ponds. USSCS, Practice Standard 378-Pond.

Alternatives considered. The Office considered a number of alternatives to the design criteria proposed for sediment ponds. The Office weighed allowing coal operators to use any sediment control measures to achieve and maintain applicable effluent limitations and control sediment. However, based upon the literature in the field, it appears unlikely that water quality standards will be achieved and maintained without sediment ponds.

Second, the Office considered alternative sediment storage volumes, detention times and dewatering devices for sediment ponds. For example, 0.2 acre-feet per acre of disturbed area was considered as a national standard and preliminarily rejected as unnecessary for all surface coal mining operations. Also, a 10 hour theoretical detention time was rejected as inadequate to achieve water quality standards. In this regard, the literature appears to say that sediment ponds must be designed with trap efficiencies exceeding 90 percent to achieve and maintain water quality goals. Therefore the Office has proposed a 24 hour theoretical detention time corresponding to 94 percent efficiency.

Proposed Section 816.47 is intended to control the release of effluents having relatively high velocities which can scour unprotected channels of receiving streams (USDOI, 1960). Scouring can destroy the aquatic, biotic communities of the receiving stream in the immediate discharge area as a result of physical factors, such as trauma, displacement, and destruction of habitat, and it can adversely impact water quality and ecology for relatively large distances downstream as a result of excessive suspended material. Most biological effects of suspended materials are also physical in character, including asphyxiation by the mechanical blockage of respiration, inhabition of photosynthesis by the obstruction of sunlight, and the irritation of gills, which may render the affected organisms more readily susceptible to infections (Hynes, 1972; and Wibler, 1969).

The proposed regulations identify devices generally applicable for dissipating water energy and preventing scour. Flexibility is provided for use of any method or combination of methods that will preclude channel deepening or enlargement.

Proposed Section 816.48 identifies measures for avoiding acid or other toxic mine drainage which might result in significant degradation of the water quality and ecology of receiving streams (USDOI, 1969; Kinney, 1964; Warner, 1978; Turner, 1958; Braley, 1954; Striffler, 1973). Biological effects may be acute or chronic in nature depending upon many factors including the type and concentration of toxic pollutants contained in the drainage, the biological species exposed to the pollutants, and the time of exposure.

The methods are broad in character and cover the practical options known for avoiding mine drainage, and some State regulations, e.g. Alabama, Tennessee, Virginia, Texas, Louisiana, Maryland, Montana, Ohio, West Virginia, South Dakota, and Illinois, specify similar methods.

Another method which was considered for inclusion is the use of drainage systems under buried spoil material to remove water contacting the problem spoils. However, this method is considered by the Office generally to be impractical because of associated handling, treatment, and time requirements. If appropriate, the regulatory authority could require this method under proposed subsection 816.48(b).

Proposed Section 816.49 sets minimum standards for permanent impoundments. The potential for development of permanent impoundments is greater in a region mined by the area method than in regions mined by the contour method, due to topographic and other limitations associated with the latter method. Consequently, most of the impoundments would probably be located in the cen-

tral and western states and would probably be developed primarily for recreational activities, for wildlife, or for livestock watering.

The Soil Conservation Service documents that are to be used as the basis for designing permanent dams or ponds were selected because these standards are widely used and accepted. See U.S. Soil Conservation Service, *Earth embankments and foundations* (1976), U.S. Soil Conservation Service *Engineering Standard for Debris Basin for Control of Sediment from Surface Mining Operations in Eastern Kentucky* (1971). The SCS has "built" 1.7 million ponds as of September 30, 1977, and is presently assisting in the design and construction of about 50,000 per year. In addition, they have constructed over 8,000 dams under PL 83-566 and PL 504 programs, Johnson, 1978. SCS standards have proven to be workable and are not so overly restrictive economically as to prohibit construction of small impoundments.

Public comment is solicited on whether the responsibility for maintenance and other safety considerations associated with permanent impoundments should be explicitly accepted by the landowner, or a governmental agency, before the regulatory authority could authorize them. Past experience has not shown this to be a particular problem.

Proposed Section 816.50 provides for ground water protection by prohibiting uncontrolled discharge of water. Uncontrolled discharge has been the source of most documented adverse impacts to date upon water quality and ecology. Control of this water is possible through the proper location, design, construction, and utilization of pits, cuts, auger holes, and other excavations.

Proposed Section 816.51 is intended to protect the recharge capacity of aquifers in the mine area. Uncontrolled mining and reclamation practices can result in significant degredation of infiltration rates, decline in water level and flow from springs, and changes in water-bearing characteristics within any aquifer-recharge area.

The impacts of surface mining on ground water may vary considerably depending on the scope and extent of the resource, infiltration rate, the porosity and permeability of the excavated overburden, the compaction of the backfill in disturbed areas, whether mining operations are above or below the water table, and the extent of ground water use in the recharge areas.

In many areas of the eastern United States, surface mining operations are in geohydrologic areas similar to the area studied by H. T. Hopkins and D. S. Mull and reported in Collier, et al., 1970. In this area, authors concluded that there was no significant change in the occurrence and movement of ground water as a result of surface mining operations.

In the western area of the United States, the effect of surface mining on ground-water resources will be variable as indicated in Northern Great Plains Resource Program, 1974.

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Hardaway, et al, 1977. Subirrigated alluvial valley floors—a reconnaissance of their properties and occurrence on

coal resource lands in the Interior Western United States: NCA, BCR Symposium, U.S. Environmental Protection Agency, Oct. 1977.

Proposed Section 816.52 would require surface and ground water monitoring where there is a potential that the water resources of the mining area may be adversely impacted by the mining. Adverse impacts of mining upon water resources are well documented. Curtis, 1974; Dyer and Curtis, 1977; Simpson, 1977; USDA, 1973; USFS, 1972; Grubb and Ryder, 1972; USDOI, 1967; Bealey, 1954; Striffler, 1973; Turner, 1958; Kinney, 1964; Warner, 1973. These impacts, however, can be either prevented or minimized through the use of available demonstrated technology at a cost that should be small in comparison to basic production costs: EPA, 1976; ICF, 1977. Monitoring is essential for determining the effectiveness of the technology, forewarning of problems, ensuring that problems are not inadvertently created, and documenting compliance with permit limitations. Monitoring requirements will be identified in the mining permit.

Surface water monitoring requirements should be tailored to the wastewater and available treatment facilities. Wastewaters with highly variable concentrations and quantities of potential contaminants must be sampled more frequently than discharges which have relatively constant or low levels of contaminants. If adequately designed, operated, and maintained, settling ponds and automatic neutralization facilities (for acid waters) will assure that the treated effluent will be relatively constant in character and contain low levels of contaminants, therefore requiring a minimum of monitoring to document compliance with the permit limitations.

Since the provisions of the Federal Water Pollution Control Act and this Act are compatible, the surface water monitoring requirements under both Acts are proposed to be coordinated in accordance with subsection 816.52(b).

Ground water monitoring would be required at only those sites where there is a possibility of disruption or degradation of the ground water system. Ground water systems can be extremely complicated; consequently, to design a monitoring program of value, it is essential that information be available on the basic geohydrological characteristics of the potentially impacted aquifers. Additionally, sampling procedures must be carefully developed to obtain representative samples. Installation of sampling and observation wells may be the only feasible alternative for monitoring many of the potentially impacted aquifers. Establishment of baseline conditions is also essential, requiring sampling in advance of mining.

Monitoring may also be required to measure progress toward restoration of recharge capacity. This monitoring would normally consist of measuring infiltration rates and permeabilities of backfilled materials. Additionally, in providing for the protection of the surface mining area's recharge capacity the regulatory authority might establish monitoring requirements including a combination of consistent criteria from paragraphs (a), (b) and (c) below:

(a) No monitoring of ground water occurrence and movement will be required when—

(1) The regulatory authority determines that occurrence and movement of ground water and spring flows will not be affected by the surface mining;

(2) The mined zone is not a significant water-bearing unit; or

(3) Ground water use in the area affected by surface mining is insignificant.

(b) Periodic monitoring of ground water levels in shallow piezometers might be required when—

(1) The mined zone is a water-bearing unit of some current or potential future use as the source of limited water supply; or

(2) Surface mining lowers water levels, decreases the yield of nearby springs, and degrades infiltration rates.

(c) Periodic monitoring of ground water levels and pumping tests to determine the aquifer characteristics prior to and after surface mining starts might be required when—

(1) The surface mining zone is a significant water-bearing unit of current or potential future use for public, agricultural, industrial or domestic supplies;

(2) Surface mining has significantly lowered the water table, decreased spring flows, and degraded infiltration rates; or

(3) The occurrence and movement of ground water has been affected by the mining.

One comment received proposed that the Office limit monitoring requirements to the procedures established under the EPA's National Pollution Discharge Elimination System (NPDES) permit program. The Office considered this alternative and decided not to adopt it. As is explained in the discussion of the proposal to adopt only the EPA's effluent limitations above, EPA's regulation of water discharges from coal mining covers only point-source discharges during the active operation phase of coal mining to surface waters.

One comment received proposed that all operators be required to conduct continuous total suspended solids/sediment monitoring in the first, second and third streams downstream from discharges from the areas disturbed by a particular operation. Under this proposal, the permittee would be required to monitor the stream beds of total suspended solids in receiving streams into which discharges from a mine immediately occur and the receiving stream into which the immediately receiving stream is a tributary. Suspended solids monitoring would also be required of the succeeding stream into which the first recieving and second receiving stream discharge. Upon analysis of this alternative, the Office decided it warrants further consideration and specifically solicits public comment.

Under Sections 507(b)(11) and 510(b)(3) of the Act and the regulations being proposed at Parts 779, 780 and 783–784 and Section 786.15, monitoring of the kind suggested by this proposal will be needed as a general matter, prior to the issuance of a permit. However, that monitoring will in large part be conducted, for areas outside a proposed mine plan area, not by the permit applicant/operator, but rather by State and Federal agencies who conduct water quality and quantity sampling programs.

On the other hand, while the Act does require monitoring of the impacts on the hydrologic balance of surface coal mining and reclamation operations during the conduct of those operations, it does not specify that the permittee conduct monitoring of surface waters outside the permit/mine plan area. *See* Sections 515(b)(10) and 517 of the Act. The Office believes that it will be necessary for the regulatory authority to insure that total suspended solids/sediment loads in receiving streams of drainage from surface coal mining and reclamation operations be adequately monitored for as far downstream as is needed to assess the impacts of particular and groups of mining operations. Therefore, in order to assure adequate protection of the hydrologic balance as required by the Act, it is believed that monitoring for considerable stretches of streams downstream from the vicinity where surface coal mining and reclamation operations are conducted would be advisable. Discretion, however, is conferred by the Act as to the determination of how far downstream from mining operations these monitoring stations must be located and as to exactly which entities should conduct offsite monitoring in receiving surface waters.

There would appear to be no measurable environmental effects between the choice of specifying that permittees or the regulatory authority or some other government agency conduct downstream sediment monitor-

ing. In any of these events, the necessary monitoring would be accomplished. However, there may be significant environmental impact as to the choices between specifying only very general criteria for downstream surface water sediment monitoring, as opposed to specifying that one, two or three downstream streams be monitored. The differing impacts between these two alternatives are dependent, of course, upon the extent to which it is necessary, on a national basis, that sediment transport for mining operations through surface waters be monitored as far as the third downstream stream from mining operations. The Office intends to conduct further analysis of this matter, utilizing the technical literature identified in the Preamble portions which discuss Sections 816.41–816.57 of the proposed regulations and any comments received.

Under Sections 515(b)(10) and 517 of the Act, surface coal mining and reclamation operations are required to be periodically monitored for both surface and ground waters impacts, in order to minimize disturbances to the hydrologic balance both on and off the minesite throughout the entire phase of those operations. The Office believes that it does not have the legal authority to limit monitoring requirements for coal mining merely to those utilized by EPA. In addition, utilization of the agency's monitoring requirements alone, would have a major adverse environmental impact, by the failure to require monitoring of nonpoint source discharges and groundwater impacts at all, and by failing to cover monitoring of point source discharges to surface waters after the active operational phase of mining.

As proposed, OSM's monitoring requirements would not specify particular locations and the exact number of samples to be collected for total suspended solids, in order to assess the impacts upon the waters receiving discharges from areas disturbed by mining. Instead, this matter would be left largely to the discretion of the regulatory authority for determination on a case-by-case basis.

Proposed Section 816.53 provides that, under certain circumstances, the regulatory authority may approve the transfer of exploratory or monitoring wells for use as water wells. Approval of such well transfer will be accompanied by a transfer of primary responsibility for any liability for danger and eventual plugging without release of liability of the mine operator. The Office recognizes that standards for the construction of potable water supply wells generally require construction practices which assure protection from surface pollution, whereas monitoring wells constructed for ground-water data collection are designed only for these limited purposes. Since wells intended for potable supply uses are usually subject to inspection and subject to approval by local public health department officials, it is expected that the regulatory authority may require certification from the local government agency before the well transfer is approved for potable supply use. Stock and irrigation uses, when well yields are sufficient for these purposes, usually do not require inspection and approval.

Proposed Section 816.54 would call for surface mining practices to be performed in such a manner that water is not contaminated, interrupted, or diminished by the mining operations. The replacement of domestic, agricultural, industrial or other legitimate water supply when impaired by the mining operations is required under Section 717 of the Act.

Proposed Section 816.55 provides for protection of the mining area's hydrologic balance by restricting the discharge of waste water, including coal processing waste, into underground mine voids. Use of underground mines for wastewater disposal has the potential of degrading ground water aquifers and stream flow.

However, such practices may be more cost effective than surface disposal facilities for an equivalent degree of environmental protection and, additionally, advantageous in such areas as fire protection, abatement of acid mine drainage, and subsidence control, by filling mine voids through sedimentation of suspended solids, may be provided by the practice. Consequently, the regulations would allow the practice provided that all necessary precautions are taken to assure the protection of the area's water resources. It should be noted that the regulatory authority's approval of such a practice will be based on environmental protection criteria, not economics. The Office considered an outright ban on all discharges into underground mine workings. However, the drafters determined that this might unduly preclude environmentally viable measures such as those authorized under the proposed rules.

Proposed Section 816.57 protects stream channels and contemplates that the regulatory authority would review and evaluate proposals to conduct any operations within 100 feet of a perennial or intermittent stream. Thus, if operations can be conducted within 100 feet of a stream in an environmentally acceptable manner, they may be approved. TVA, 1971; Karr & Schlosser, 1977. This concept does permit the use of erosion and drainage control measures near the channel if approved by the regulatory authority. These exemptions are necessary if the environmental impacts are to be minimized or prevented. The 100-foot limit is based on typical distances that should be maintained to protect stream channels from sedimentation. Site-by-site distance determinations would be impractical and very difficult to enforce. It should be noted that under the proposed rules, an operator could not mine throuh a stream unless it had been diverted around the area of disturbance.

The general rule recognizes that buffer zones are an effective method to be used in conjunction with a sediment pond to prevent sedimentation to streams by runoff from disturbed surface areas (Karr & Schlosser, 1978, 229). *See* also: Grim and Hill, *Environmental Protection in Surface Mining of Coal* (U.S. EPA, 1974); Weigle, *Designing Coal Haul Roads for Good Drainage* (USDA Forest Service, 1965) and *Guidelines for Construction of Mine Roads* (Region X U.S. EPA–Appendix "D" to Grim and Hill, *supra.*) It also recognizes that small streams may have considerable biologic complexity worthy of protection under Section 515(b)(24) of the Act, even if the streams are not perennial (Hynes, H.B.N., 1970, p. 403). However, since even the most ephemeral streams may have a benthic biota, the Office believes that some reasonable level of biological community complexity should exist in streams before they deserve direct protection. The definition of "macroinvertebrate biological community" in Section 701.5 seeks to do this by eliminating from consideration most of the very small forms of stream biota which have brief, ephemeral lifespans, unless they are joined in the biota by longer lived, larger, and complex forms of life which characterize the more permanent streams. (Hynes, *supra*).

Although it would not be necessary to establish the exact gradient of an entire stream channel through which mining has been allowed, it is necessary to reproduce the combination of the average gradient, channel configuration, channel roughness, and channel bank stability in order to minimize disturbances to the sediment transport process. In effect, the gradient must be reestablished to the degree necessary to allow natural fluvial processes to continue, thus, the requirement to maintain the average stream gradient for diversions that are to remain in place after operations are completed.

§ 816.59 Coal recovery.

This Section would address two persistent problems of coal mining: (1). The loss of coal resources when a mining operation does not result in the recovery of all the coal at a particular mining site; and (2). Recurrent environmental degradation when land is reopened for mining to recover the

remaining coal. The regulation would, if adopted, require the operator to conduct mining operations so as to maximize resource recovery. This would be accomplished by mining all available coal at a minesite which it is economically feasible to extract.

The authority for this proposed Section is found in Sections 102, 201, 501, 503, 504, 510, and 515 of the Act.

The Office considered including specific language requiring the recovery of all coal economically feasible to be recovered from a site, but did not include such language in the proposed regulations. The proposed regulations would instead be satisfied by a good faith demonstration by the operator to the regulatory authority that all coal which is economically feasible to recover will be mined.

The most commonly mentioned percentages were 85, 90, and 95. These alternatives were not included for three reasons. First, it is difficult to precisely define the amount of coal existing at a site prior to mining, because of variable thickness of seams and partings, variable quality of the coal, and variations in depth of overburden. Second, health and safety considerations may preclude attainment of fixed percentages of recovery. Third, constant variation in thickness of seams, quality of coal, depth of overburden, and mining conditions would require a continuous monitoring and detailed ongoing exploration program which is believed to be beyond the capability of the regulatory authority to undertake or oversee. However, the Office will continue to consider whether fixed percentage recovery standards should be required.

Public comment on an express requirement for recovery of coal economically feasible to recover versus this implied requirement is invited.

A second alternative of requiring a separate list of cost variables and resource figures from the operator was also considered but not included at this time. Public comment is invited on the utility of requiring this information in permit application, for use by the regulatory authority according to a fixed formula for determing economic feasibility of recovery.

The reader's attention is directed to proposed regulations for determining recoverable reserves under a Federal lease, recently published by the United States Geological Survey, 43 Fed. Reg. 29631 (July 10, 1978).

Under the proposed regulations published today, the regulatory authority would monitor the mining operations to assure that the operator is proceeding in compliance with the mining plan and with the determination of recoverable coal. Variations in recoverability may be necessary where dictated by quality of coal resources, by health and safety considerations, by the geometry of the mine workings, and by other factors.

§ 816.61–816.68 Use of explosives.

These Sections are being proposed to protect the safety and property of the public, underground mines, and ground and surface waters outside of permit areas from blasting performed in surface coal mining activities.

Prior to the enactment of Pub. L. 95–87, the Subcommittee on Energy and Environment of the House Committee on Interior and Insular Affairs heard extensive testimony on the extent and the nature of the hazards associated with blasting in surface mining. *Surface Mining Control and Reclamation Act of 1977: Hearings on H.R. 2 before the Subcommittee on Energy and Environment of the House Comm. on Interior and Insular Affairs, 95th Cong., 1st Sess.* (1977). Those hearings indicated that the process by which coal is surface mined required a great deal of blasting to fracture the rock strata which overlies the coal seam.

When explosives are detonated, large amounts of energy are rapidly released by means of a chemical reaction. The most dramatic effect of the release of these vast quantities of energy is the generation of flying debris, rocks, dust, and other materials which, during the blast, can be lofted in the air and dropped directly upon persons and property near strip mine sites. *Ibid.* This "flying debris" can be widespread and has resulted in people being killed by rocks crashing through their roofs. *Id.* at 289, 305, 313. Hearings, *supra,* Appalachian Peoples Service Organization); 211 (Statement of Judy Stephenson, Director, Save Our Mountains, Inc.).

In addition, blasting causes "air blast." The noise and concussions resulting from air blasts produce severe annoyances to people caught in the wake of an air blast pressure wave and often cause damage in forms of:

> "electrical black-outs from destroyed transformers and downed lines, the obstruction of stream beds, damage to structural foundations, damage to sidewalks, cracking or separation of masonry, doors thrown out of plumb, windows cracked by excessive air pressure or concussion, damage to walls and paneling and loosening of cabinet fixtures."

Hearings, *supra* Part II at 284, 13 (Testimony of Center for Science in the Public Interest); Hearings, *supra* Part III at 25 (Testimony of Rev. R. Baldwin Lloyd, Appalachian Peoples Service Organization); 210 (Earl Cheatwood, Alabama Needs Federal Coal Surface Mining Legislation). Hearings, *supra* Part IV at 227 (Testimony of Northern Plains Resource Council.)

The cumulative effects of the damage inflicted upon the victims of mine blasting have been enormous. Property damage in Appalachia alone was estimated at $1.5 billion for the years 1965–1975. Hearings, *supra* Part II at 283. In at least one State, private insurance firms and Federal agencies have denied property insurance and guaranteed loans for prospective purchasers of dwellings near mines as a result of the damage caused by surface mining blasting. *Ibid.*

Sections 816.61-816.68 are proposed under the authority of Section 102, 201, 501, 503, 504, 515, 517 and 719 of the Act.

B. Materials used by OSM to develop these regulations include:

1. Ashley, C., and Parkes, D. B., 1976, *Blasting in Urban Areas: Tunnels & Tunnelling* (British Tunnelling Society), Sept. 1976, p. 60–67.

2. Barnes, Jack (John B.), 1977, *The effects of strip mine blasting on residential structures—Ayshire Mine, Warrick and Vanderburg Counties, Indiana*: Paper presented to the Indiana Academy of Science, Indianapolis, Ind., Oct. 28, 1977, 19 p.

3. Coal Mine Health and Safety Act of 1977 and 75 CFR, Subpart N.

4. Grim, E. and Hill, R., 1974, *Environmental Protection in Surface Coal Mining* (U.S. Environmental Protection Agency, No. 1BB040).

5. Kentucky Department of Mines and Minerals, 1977, Laws and regulations governing explosives and blasting: Lexington, Ky., p. 1.

6. Maryland Geological Survey, Bureau of Mines, 1973, Blasting restrictions (08.06.05.09) and Regulations governing blasting (08.06.05), in Bituminous coal strip mines and auger regulations, Maryland Department of Natural Resources Rules and Regulations, p. 23.

7. Medearis, Kenneth, 1976, *The development of rational damage criteria for low-rise structures subjected to blasting vibrations:* A Report of the National Crushed Stone Association: Kenneth Medearis Associates, Fort Collins, Colo., and Valley Forge, Pa., 94 p. (duplicated report).

8. Miller, P. H., (no date), *Blasting vibrations and air blast*: Park Central, Ill., Atlas Powder Co., 16 p.

9. Nicholls, H. R., Johnson, C. F., and Duvall, W. I., 1971, *Blasting vibrations and their effects on structures*: U.S. Bureau on Mines Bulletin 656, p. 13–29.

10. Old Ben Coal Company, Comments to Office of Surface Mining (1978).

11. Pennsylvania Department of Environmental Resources, Rules and Regulations, Title XXV, Pennsylvania Code, Ch. 211.

12. Research Energy of Ohio, Inc., Comments to Office of Surface Mining, 1978.

13. Siskind, D. E., 1977, *Structure vibrations from blast produced noise*, in 18th International Rock Mechanics Symposium, June 1977, Keystone, Colo.: Proceedings, p. 1A3-1-1A3-5.

14. Siskind, D. E., Stachura, V. J., and Radcliffe, K. S., 1976, *Noise and vibrations in residential structures from quarry production blasting—measurements at six sites in Illinois*: U.S. Bureau of Mines Report of Investigation RI 8168, 17 p.

15. Siskind, D. E., and Stachura, V. J., 1977, *Recording system for blast noise measurement*: Sound and vibrations Journal, p. 20-23.

16. Siskind, D. E., and Summers, C. R., 1974, *Blast noise standards and instrumentation*: U.S. Bureau of Mines, Environmental Research Program, Technical Progress Report ("TPR 78").

17. University of Maryland, *An Investigation into Delay Blasting*, 1975, NSF Contract APR 75-05171 to the University of Maryland and Subcontract No. M-218907 to Martin Marietta Laboratories.

Section 816.61 contains general requirements for the use of explosives. Under the provisions of proposed Sections 816.61 and 816.64(e) all blasting operations involving the use of more than the equivalent of 5 pounds of TNT would be required to be conducted according to published time schedules.

Five pounds equivalent of TNT has been selected on the basis of blasting experience which shows that charges of this size can cause significant disturbance when used in an improper blast design. Since commercial explosives and blasting agents have approximately the same energy as TNT, the five pound limit would apply to all commercial blasting products.

Section 816.61 would provide for the protection against the adverse effects of blasting by specification of certain minimum training requirements for the personnel used by the industry to conduct blasting operations. Persons working with explosives would be required to be familiar with the Mine Safety and Health Administration (MSHA) regulations, in order to protect the health and safety of workers and the general public. They would also have to be familiar with the Bureau of Alcohol, Tobacco, and Firearms, Department of Treasury regulations to assure that explosives do not fall into unauthorized hands. The proposed requirement for current and valid certificates would be accomplished under the training and certification programs to be instituted under proposed Subchapter M, as part of the permanent regulatory program.

The preblasting survey requirement proposed under Section 816.62 is mandated under Section 515(b)(15)(E) of the Act. That Section of the Act expressly establishes the one-half mile distance requirement. Provision is made for requiring approval by the regulatory authority of those persons actually performing the survey on behalf of the mining operator to insure that the survey procedures will be competently performed. Public comments and suggestions are requested with respect to the minimum standards, if any, which OSM should require be met by a person to be approved by the regulatory authority to conduct preblasting surveys. Such comments should be supported where possible, by appropriate technical literature.

The object of the survey would be twofold. One is to increase communication between the mining entity and the public about blasting operations. Therefore, survey procedures are proposed with a minimum level of formality. The second object of the survey is to provide for the establishment of a preblasting record as to the existing condition of structures and other physical facilities within the survey area, so that operations may be designed to avoid damage and to provide a baseline record against which the effects of the mining-related blasting can be assessed.

Examination of relevant technology thus far has revealed no current, reliable methods for either predicting the weights of individual charges that would prevent damage to structures or determining the condition of structures in terms of resistance to vibration of structural and nonstructural elements. As a result, the procedures for pre-blasting surveys are limited to determining the conditions of relevant structures and to document any preblasting damage. However, because technology for the types of prediction and determination discussed here may be developing for useful application, the Office specifically invites comments and supporting materials as to whether additional or modified procedures from those set forth in the proposed text should be required in the final regulations.

The interim program regulations require the schedule to specify time increments of not more than 4 hours, but not to cover all hours of the working day. The wording in those regulations has been subject to various interpretations. The permanent program regulations propose to leave the number and length of time increments open but restrict the aggregate length of the time increments to four hours per day. This change clarifies the requirement and would still give the mine operator sufficient flexibility to carry out routine blasting activities.

The proposed blasting schedule would inform local residents of their right to a preblasting survey and advise them of how to obtain such a survey. The resident would also be told how the public will be protected from inadvertantly entering the blasting area. Audible blast warnings and all-clear signals would be described. A description of emergency situations which will permit the operator to deviate from the schedule will be part of the schedule.

The Office has considered whether the notice should be required to contain the weight and types of explosives to be used. However, because these will vary with each blast, it was decided that this information need not have to be in the notice. Available information also indicates that it is not possible to predict, in advance, all emergency conditions that can occur when blasting. The notice, therefore, would identify the types of emergencies (defined in Section 816.65) that the regulatory authority has approved for blasting at other than scheduled times.

Under proposed paragraph 816.65(a)(1), blasting would be restricted to daylight hours, with provision for the regulatory authority to further limit the times of blasting. Blasting would be restricted to daylight hours for two reasons.

First, blasting at night significantly increases hazards to mine workers and makes site access-security and protection of the public much more difficult. Second, blasting at night is much more disruptive to the peace and comfort of nearby residents. The overwhelming majority of surface mines already restrict their blasting activities to daylight hours without unduly hampering the efficiency of operations.

The interim program regulations require notification of the meaning of the warning signals to be given only to "persons within the permit area". Because many people may commute to work regularly within the permit area, the proposed permanent program regulations would require notification to these persons so that they may be afforded the same protection as local residents.

Under paragraph 816.65 (a)(4), specific quantitative standards are proposed to control the adverse effects of air blast resulting from blasting in surface mining operations. Air blast is a compression wave that travels through the atmosphere in much the same way as a sound wave. It is caused when energy from the explosion is released directly into the atmosphere or by the movement of the ground surface after blasting. (Miller, (no date), pp. 10-15).

When air blast is audible to the human ear, it is called noise. When air blast creates low frequency energy and is inaudible, it is called concussion. Air blast is measured as an overpressure (air pressure above atmospheric pressure), either in pounds per square inch (psi) or in decibels (dB).

Air blast can cause both structural damage and annoyance to people and animals. Air blast can cause external masonry and internal plaster to crack and can damage windows. The most common effects of air blast are: (1) disturbances created by the rattling of windows, panels and doors which give the impression that the structure is vibrating; and, (2) generation of loud noise which may be beyond human tolerance. High levels of low frequency air blast can cause hearing damage, even though the human hearing system does not register the sensation as sound. Siskind and Summers TPR - 78, pp. 15-16.

The method proposed for controlling air blast is a scale of decibel peak standards. An alternative control considered by the drafters was a requirement for the stemming of all blast holes. Stemming is a procedure where explosives placed in a bore hole are covered with fill material, to damp the blast effect. Miller, (no date) at 14. At the time of the promulgation of the interim performance standards, it was determined that the prescribed amounts of stemming was impossible to comply with under many conditions. See 42 *Fed. Reg.* 62658 (Dec. 13, 1977). No further information on this issue has come to the attention of the Office. However, if such information becomes available, the Office will further consider the advisibility of promulgation of stemming requirements. Accordingly, comments on the use of stemming as a means for the national regulation of air blast are specifically invited.

A decibel scale is a logarithmic scale directly related to overpressure and is the scale commonly used to measure sound and airblast. All airblast instrumentation measures in decibel units. Various instruments respond to different frequency spectra in measuring airblast. To avoid undue restrictions on the type of instrumentation that an operator can use to measure airblast, the Bureau of Mines has developed a table, shown in Paragraph 816.65(a)(6), allowing for variations in instrumentation frequency response. Air blast frequency is measured in Hertz (Hz) which is equivalent to cycles per second.

Airblast levels and appropriate measurement instrumentation specifications are presented in the table. The values were derived from structure response data collected by two ongoing Bureau of Mines research projects ("Airblast Assessment and Control" and "Determination of Criteria for Ground Vibration Damage from Surface Mine Blasting"). These two projects are scheduled to be finished October 1, 1978, and there are plans to publish the complete results of both projects in the fall of 1978.

The Bureau of Mines plotted and analyzed hundreds of structure response, ground vibration, and airblast time histories. The Bureau of Mines derived an appropriate airblast vs. ground vibration equivalence, consistent with the latest data on structure response, damage, and tolerable levels. While further analysis is planned on both the currently existing body of data and additonal measurements, the values in the table are believed to represent the latest state-of-the-art in understanding airblast effects on structures and methods of airblast measurement. (Bureau of Mines summaries of this research have been submitted to the Office and are available in the OSM Administrative Record.)

Two independent approaches were used to derive the values in the table. The more rigorous analysis involved determination of the structure response associated with the already recommended 1.0 inch per second ground vibration. Plots were made of the data within four classes: one-story homes, two-story homes, corner responses (structural), and mid-wall responses (non-structural).

The airblast response data were then similarly analyzed, except that the above four categories were each examined for six frequency intervals, including the four included in the table. The results of this series of comparisons were within a narrow range, probably because the two natural frequencies of structure corners and walls are within fairly narrow ranges.

The mid-wall and corner motions could be controlled by peak-flat (0.1-500 Hz) airblasts of 135 to 137 dB-linear, and C-slow maximums of 109-112 dBC. The corner responses, which are related to potential damage, justified a maximum airblast level of 137 dB-linear, when the most disadvantageous combination of structure response to ground vibration and structure response to airblast was considered. Consequently, the use of 135 dB-linear (0.1 Hz) represents a small safety factor over the ground vibration standard of 1.0 in/sec. This factor was needed to reduce human annoyance factors, due to mid-wall motions and associated rattling. C-weighted-slow responses were similarly analyzed with the maximum value of 109 dBC-slow recommended for the same reason.

A second, independent technique was used to analyze the airblast response data, involving displacement-produced strain which is related to cracking in interior walls. Displacement itself is not a good damage descriptor because of its frequency dependence (unlike particle velocity). However, the structure walls and corners have definite frequency ranges, so an analysis was performed to determine the airblast levels associated with the lowest damage case, 0.016 inches maximum wall displacement. For both mid-walls and gross-structure motions (corners), the most strict values were derived by taking the lowest natural frequencies typically encountered, 12 Hz and 6 Hz, respectively. In all cases, the associated airblast damage level for both one and two story homes equaled or exceeded the 135 dB-linear (0.1 Hz) peak linear and 109 dBC-slow, with most values within a few dB of these limits. The compatible results of these two independent analyses lends considerable strength and validity to the results.

The use of the C-slow scale has been recommended by the Committee on Hearing and Bioacoustics Working Group 69 to the U.S.E.P.A.. It is uncertain whether this method is superior to peak-linear but it does provide a logical alternative airblast monitoring system and is under continuing study.

Siskind, 1974 (TPR-78) was based on a few mine blasts and an analysis of a great deal of other data. The values recommended in the table in Section 816.65(a)(6) are slightly stricter than TPR-78, with the 6 Hz value of 130 dBL in the table corresponding to the recommended absolute minimum damage level of 136 dB-linear (5 Hz) of TPR-78. Consequently, these recommendations should not only prevent airblast damage, but also should reduce annoyance factors.

The industry is believed to be capable of meeting the airblast values, if proper blast designs are utilized. This will require additional care by operators with thin parting layers and other confinement problems, as poorly stemmed charges can easily exceed the values specified. Most mining operations and blast engineering consultants have equipment which has flat frequency response down to 5 Hz, and will be designing to meet the 130 dB criterion.

Proposed Section 816.65(a)(6) has been drafted to indicate that any one of the four specified frequency ranges may be used to characterize airblast.

Under paragraph 816.65(a)(7) the Office proposes to condition the use of explosives within specified distances, upon prior approval of the regulatory authority and other relevant entities. The Office is aware that blasting can be conducted safely within the distances set forth in the proposed regulations. However, the legislative history of the Act and technical studies re-

viewed show that significant adverse effects still continue to occur to persons and property at distances both within and beyond those limits being proposed. Accordingly, the Office proposes to establish distance limits to protect public health and safety.

The Office has considered arguments that these restrictions conflict with the provisions of Section 522(e) of the Act, because the proposed regulation's distances are more stringent than those of the Act. Subsections 522(e)(4)-(5) of the Act prohibit any coal mining within 300 feet of certain structures and 100 feet of public roads and cemeteries. However, the Office has decided that the blasting distance restrictions do not conflict with Section 522(e), as was recognized in consideration of a similar regulation under the interim regulatory program. *Surface Mining Regulation Litigation*, 11 ERC 1593, 1603, (D.D.C., 1978). As the court held there, the limitation on blasting by distance restriction, coupled with the requirement of prior approval of the regulatory authority, is within the power of the Office to promulgate under Section 515(b)(15), of the Act because it is not an absolute prohibition on mining as is contained in Section 522(e) of the Act.

The proposed blasting distance restrictions are based on several factors. First, is the recognition that Congress was itself specifically aware that blasting damage can extend far beyond a few hundred feet from the site of the blast. Even early versions of the bill recognized that blasting could cause damage far beyond the permit area. Section 515(b)(15) of the 1974 Act limited the type of explosives and detonating equipment based upon the conditions of the site "so as to prevent (i) injury to persons, (ii) damage to public and private property *outside* the permit area. . . ." (Emphasis supplied.) This subsection remained intact in the final bill. See Section 515(b)(15)(C) of the Act.

During its consideration of the bill in the 1977 session, Congress approved a number of amendments to provide greater protection to residents who lived outside the permit area. One of the amendments, later Section 515(b)(15)(E), provided for a pre-blasting survey upon the request of a resident or owner of a structure within one-half mile of the permit area. In expressing his support for this amendment, Congressman Udall said:

"This problem has been one of the most troublesome for individuals living in such areas. The gentleman offered several amendments to protect homeowners and to provide notice in case of blasting. I think this is a good amendment and strengthens the bill. 123 Cong. Rec. H. 3825 (April 29, 1977)."

Most significantly, during the hearings conducted by the House Subcommittee prior to the passage of the Act, it was indicated that the Congress expressly expected that the Office would promulgate regulations to establish the type of blasting distance restrictions now being proposed and that such restrictions were already being achieved by the industry. During those hearings, one group testifying proposed additions to the draft Section 515(b)(15) of the Act, including an absolute ban on strip mining within 1000 feet of any occupied dwelling, public building, school, church, community center, public park, or cemetery. This recommendation was based on extensive travel throughout the coal fields and findings that blowouts on the sides of highwalls would throw flyrock out on a neighboring community for a distance of about 1000 feet. *Hearings on H.R. 2 before the Subcommittee on Energy and Environment of the House Committee on Interior and Insular Affairs, 95th Cong., 1st Sess.* (1977), Part II at 286–289. Congressman Seiberling, the Chairman of the Subcommittee, indicated that this should be implemented by way of regulation, rather than amendment of the Act. *Id.*, at 293.

That Subcommittee also heard from one of the largest mining industrial groups in the country on the feasibility of these distance restrictions:

"We have solved the blasting problem in Pennsylvania. We are closely regulated. Our mine inspector has to approve our blasting procedure and the plan on which we are going to notify the people. . . . The State of Pennsylvania has a standard for the maximum size of a blast for strip mining. We are not permitted to exceed that standard. *When we get closer to buildings and homes than 1,000 feet, we often must reduce that standard.*" Hearings, *supra* Part III at 89 (Statement of W. Harger, President, Western Pennsylvania Surface Mine Operators' Association). (Emphasis added).

In addition to Congress' specific expectation that the Office establish specific distance restrictions on blasting, technical studies received by it show that the proposed limits of 1,000 feet from buildings and 500 feet from other facilities are well within the ranges of damage caused by blasting involved in mining. A study performed by a professor of geology at Indiana State University indicated that there was structural damage caused by blasting to 89 percent of the buildings within a 2½ mile radius of the Ayrshire Mine in Warrick County, Ind. John Barnes, 1977. See 123 Cong. on Residential Structures-Ayrshire Mine (*1977*). *See 123 Cong. Rec. 8133* (*May 20, 1977*). Vibration damage to natural scenic formations in the West has been noted as far as one-quarter of a mile (1,320 feet) from the site of the blast. (*Grim and Hill*, 1974, p. 93.) Instrumentation currently in use is capable of measuring noise and vibration in order to assess damage from blast vibrations at distances up to 1,000 feet from the blast. (*Siskind and Stachura*, 1977.)

The distance limitation for blasting within 500 feet of an underground mine is expressly required by Section 515(b)(12) of the Act. The Office is soliciting suggestions on the definition of the active workings of a mine for these purposes. It is not the intent of the Office to prohibit blasting from the vicinity of inactive portions of underground mines, in circumstances where there is no risk of danger to life, property or the environment.

Under the proposed regulations, approval of the regulatory authority for waiver of the distance limits would depend primarily upon the results of a preblasting survey or other appropriate investigation. Similar criteria have been previously upheld for the interim regulatory program in *Surface Mining Regulation Litigation*, supra, 11 ERC at 1603.

The Office considered requiring a waiver from affected landowners before mining within the 1,000-foot distance limit would be approved. However, the landowner is believed to be adequately protected by other portions of the blasting regulations, principally by the requirement that the person conducting blasting demonstrate to the regulatory authority that blasting within the 1,000-foot distance limit can and will be done safely.

The Office has proposed a requirement for flyrock limitations and solicits its suggestions on this subject. Bureau of Mines contract report J0366017, by Management Science Associates, identifies flyrock as the major cause of in-mine accidents. A further study has been funded to quantify the flyrock problem. The requirement which is being proposed for flyrock limitation would prohibit rock from being thrown outside the mine property boundaries, would prohibit rock from being thrown more than half the distance from the blast to the nearest dwelling, other inhabited structure, or right-of-way, and would prohibit rock from being thrown past the regulated access zone specified in proposed Section 816.65(a)(4).

To prevent injury to persons and damage to structures within and around the area of operations from the effects of ground vibration caused by blasting, the Office proposes to establish a maximum peak particle velocity limitation of not more than 1 inch per second at the immediate location of those structures.

Blasting causes large amounts of energy to be released in the form of vibrations; that is, shock waves radiating from the site of the blast. It is this shock wave that fragments the rock near boreholes in which explosives are detonated. As the shock waves travel or propagate, they stabilize and become seismic waves. Seismic waves which propagate through the earth are called body waves. Those which propagate along the surface of the earth or travel to the surface and are reflected back into the earth are called surface waves. (Miller (no date)).

These seismic waves displace the rock or soil particles of which the earth is composed, causing these particles to oscillate. Particle velocity defines ". . . how fast a particle or structure is moved by passing seismic waves, measured in inches (millimeters) per second." (Grim and Hill, 1974 page 94). It is the speed at which the passing seismic waves move the ground under structures that determines the likelihood of damage. *Ibid.*

To prevent such damage, the Office proposes to adopt a regulatory scheme whereby the peak-particle velocity would always be limited at a minimum to 1 inch per second. Allowance is also made for the regulatory authority to reduce this limit in particular cases so as to account for certain listed site-specific characteristics. Subsection 816.65(j). Further, to ease in application of the 1-inch per second limit in the field, blasting vibrations would be considered to be within that limit if a distance-to-charge weight, per delay of explosives, formula set out at Subsection 816.65(m) is followed.

The proposed 1 inch per second peak particle velocity limit is based primarily upon Subsection 515(b) (10) and paragraph 515(b)(15)(c) of the Act and a review of technical materials. Those materials reveal a correlation between damage to structures and ground motion, such that the Office believes it necessary to limit particle velocity to a maximum of 1 inch per second to prevent such damage.

The first study considered by the Office was that of Nicholls, 1971. That study represents the culmination of a 10-year study by the Bureau of Mines to analyze the effects of ground vibrations and air blast on structures. In the course of its work, the Bureau conducted its own experiments and reviewed previously published data in order to establish reliable damage criteria. The Bureau concluded that peak particle velocity was more closely associated with damage to structures than any other single measurement. Nicholls, 1971, p. 22. The Bureau recommended 2 inches per second as a "safe vibration criterion", that is, the point at which, in its view, there "appears" to be a reasonable separation between the safe and the damage zones. Nicholls, 1971, p. 23. The Bureau classed 2 inches per second as a "probability type criterion." BOM 656, p. 24. By this it meant that at a peak particle velocity of 2 inches per second the probability of damage was small. The Bureau acknowledged, however, that "the safe vibration criterion is not a value below which damage will not occur and above which damage will occur." *Ibid.*

Because damage still occurred at the 2-inch per second level, according to Nicholls, the Office finds that a 1-inch per second limit is needed. The 1-inch per second level is derived from Figure 3.7 of Nicholls, 1971, p. 25. As that scattergram indicates, 1-inch per second is the point at which damage did not occur.

In addition, OSM believes that the following factors, when weighed with Nicholls, 1971, further support the selection of a 1-inch per second limit. Many of the complex questions involving damage caused by blasting in coal surface mining were not investigated by the Bureau of Mines. Nicholls, 1971, was based not upon blasting in coal surface mining, but blasting in quarries, at construction sites, and mechanical simulations of actual blast vibrations. Conditions unique to surface coal mining justify a more stringent standard.

Generally, surface mining involves greater amounts of explosives, shots of longer duration, and more frequent firing than does quarrying, for instance. Cumulative effects of repeated blasting, even at low peak particle velocities, could increase the severity of the damage caused by blasting. Barnes, 1977. The geology of the blasting site may affect the propagation of seismic waves. Nicholls, 1971, p. 53; Barnes, 1977, at 13. The frequency of waves and their effect upon structures may be an important factor in determining damage caused by blasting. Medearis, 1976, p. 1. Where the frequencies of the ground vibration and the resonant frequency of the structure being vibrated are the same or nearly the same, there is a greater potential for damage. This seems to be the case in surface mining. Medearis, 1976, p. 53. These factors make surface coal mine blasting potentially more damaging than the blasting on which BOM 656 is based.

In addition to Nicholls, 1971, other technical studies reviewed by the Office support a 1-inch per second limit. The study of Barnes, 1976 investigated damage to structures in the vicinity of surface coal mining operations in Indiana and primarily used the number, length and width of structural cracks as indication of damages. This was essentially the same methodology as was employed by Nicholls and the studies reviewed in Nicholls, 1971. Barnes' observations show that blasting at 2 inches per second may cause damage. Barnes, 1976, at 12.

Ashley and Parkes, 1976 is a study of problems encountered by two British companies in constructing tunnels in urban areas. For protection of property in good repair, those authors recommend a 1-inch per second standard. In addition to technical studies, the Office also notes that at least one of the largest coal producing States adopted a 1-inch per second standard to regulate surface coal mine blasting prior to enactment of the Act. 25 *Pa. Code* Section 211.45.

Compliance with a peak particle velocity of 1, rather than 2 inches per second, involves only the reduction in the maximum weight of explosives in pounds per millisecond delay period. It does not require the installation and use of additional special control equipment. Information provided to the Office by one industry member and an engineering firm indicate that mining operations can be consistently conducted within the 1-inch per second limit. Comments of Old Ben Coal Company, 1978 (112 of 155 blasts had a velocity of less than *0.5* inch per second); Comments of Research Energy of Ohio, Inc. 1978.

Under the proposal, achievement of the 1-inch per second limit may, in general, be made in either of two ways. First, blasting will be deemed to be in compliance with the 1-inch per second limit if conducted according to the standard equation at Subsection 816.65(m). As an alternative, seismograph measurements can be used to establish that blasting is conducted without exceeding the 1-inch per second limit.

The first alternative, use of a standard equation, is based upon a standard formula for determining the weight of explosives that, if detonated at intervals of 8 milliseconds or longer, will not cause peak particle velocities to exceed 1-inch per second at specified distances. This formula was derived from a special study done for the Office by the Bureau of Mines which is available for public inspection in the Washington office and copies of which will be made available for inspection upon request at the regional offices.

Coal mine blast vibration data were analyzed and the scale factor of 60 was derived empirically. The scale factor is defined as the distance from the blast to the structure of interest, divided by the square root of the maximum weight of explosive fired per delay. The table in proposed subsection 816.65(m) correlates the distance and charge weight needed for a scale factor of 60. The table distances are minimum distances which must be maintained between the blast and a

structure for the given charge weight. For instance the distance 300, divided by the square root of 25, the charge weight, equals a scaled distance of 60.

The regulation in proposed subsection 816.67(b), would provide for the use of a lower scaled distance, upon approval of the regulatory authority, if the mine operator can prove, through submission of blasting reports including seismograph records, that this lower scaled distance will not produce vibrations greater than 1 inch per second. Nicholls, 1971 determined that a scaled distance of 50 would protect against vibrations greater than 2 inches per second. The Bureau of Mines study done for the Office determined that the scaled distance of 60 would protect against vibrations greater than 1 inch per second.

A millisecond is 1/1000 of a second. A millisecond delay between explosions is used to prevent vibrations produced by two explosive charges from reinforcing each other and producing higher vibration levels. Nicholls, 1971, determined that a delay interval of 8 milliseconds or greater will prevent such reinforcement. The Office considered raising this minimum delay interval to 17 milliseconds, based on *An Investigation into Delay Blasting,* 1975, the University of Maryland, which showed that delay electric blasting caps can have significant errors in firing time. However, the delay electric blasting caps manufactured by duPont, Atlas, and Hercules, the only domestic manufacturers, all have minimum delay intervals of 25 milliseconds, which will prevent vibration reinforcement even with these inaccuracies. When detonating cord delays are used, they are initiated in a series sequence one after the other. Therefore, the likelihood that two 8 millisecond detonating cord delays will fire within a short enough time period to significantly reinforce each other is very small.

Extending the delay interval to 17 milliseconds would introduce a hazard. Because the delay elements are initiated sequentially on the ground surface, some charges will detonate before all the initiators in a blast have been activated. This increases the possibility of differential burden movement which will separate the charge in the blasthole. This results in undetonated explosive being left in the burden after blasting. This undetonated explosive is prone to detonation by the subsequent activities of heavy equipment. In view of the foregoing discussion, the 8 millisecond delay interval has been retained.

Under the alternative method of implementation of the 1-inch per second limit, seismographic measurements could be used. This could be done in two ways. First, seismograph records of every shot would be obtained. Proposed subsection 816.67(a). Second, seismographs would be used to develop sufficient data to establish that use of a modiffcation to the standard weight-distance equation of Subsection 816.65(m) would still result in compliance with the 1-inch per second limit. Proposed subsection 816.67(b). The latter provision is based on recognition that there may be peculiarities of certain site-specific factors warranting a change from use of the standard equation. All such changes would, however, be first approved by the regulatory authority. If deemed necessary, the regulatory authority could require a seismograph recording of all blasts.

As an additional safeguard, the Office is also proposing an additional peak-particle velocity ground motion limitation on blasting. Subsection 816.65(n). This requirement would prevent structures and persons from being subjected to excessive vibrations which approach steady state. Human beings are known to be more disturbed by steady state vibrations than by brief, impulsive type vibrations. Structures are also more responsive to steady state vibrations, especially when the frequency of the vibration approximates the resonant frequency of the structure.

The Office is also soliciting suggestions on the use of surface delay systems in conjunction with in-hole delays, either electric or nonelectric. Combinations of surface and in-hole delay systems result in more scatter or randomness in initiator firing times. However, in many instances these systems have proved to be very useful in reducing ground vibrations. The Office feels that these systems should be used only where blasting reports, accompanied by seismograph records, demonstrate that a particular delay pattern will not produce peak particle velocities greater than 1 inch per second.

As was discussed above, in conjunction with the 1-inch per second ground motion limit under Section 816.65, the Office proposes to allow the use of seismographs as an alternative to the standard explosives weight-distance formula. It is also proposed under Section 816.67, that the regulatory authority may require persons engaged in blasting to make seismographic recordings, even if the standard formula is being adhered to. This authority is provided to insure that the standard formula factors are effective for limiting ground motion from blasting in all relevant situations and for identifying those cases where additional precautions are needed to preclude damage or injury to the public and the environment from blasting.

Seismograph records may be used to establish the validity of using a modified equation to limit ground vibrations to 1 inch per second. If this proposed Section is adopted, upon receipt of a petition accompanied by appropriate blasting reports and seismograph records, the regulatory authority could approve the use of a scaled distance less than 60 if it has been shown that the reduced scaled-distance will not result in vibrations greater than 1 inch per second. The requirement that the seismograph record contain a calibration signal of the gain setting is to assure that the gain setting used in calculating the vibration level is identical to that used during the recording process.

§ 816.71-816.73 Disposal of excess spoil.

Spoil disposal practices in surface mining over the years have had a major impact on the environment and represented a significant hazard to life and property. The requirements set forth in these Sections of the proposed regulations protect life, property, and the environment by establishing criteria for proper disposal of fill material to achieve adequate drainage control and stability. The requirements in the interim program performance standards are proposed to be broadened to include alternatives of utilizing the West Virginia method of rock core drainage. The use of this method has been controversial it is highly touted in practice by operators, and eyed somewhat skeptically by the engineering profession.

Authority for these proposed Sections is found in Sections 102, 201, 501, 503, 504, 507, 508, 510, and 515 of the Act.

Literature utilized in the preparation of these proposed regulations includes:

1. American Society of Civil Engineers; "Geotechnical Practice for Disposal of Solid Waste Materials"; A.S.C.E. Symposium—March 1977, Ann Arbor, Mich.

2. American Society of Civil Engineers, "Stability and Performance of Slopes and Embankments," August 1969. American Society of Civil Engineers, *Stability of Rock Cuts.* Edited by E. J. Cording, 1972.

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Applicable State and Federal laws comparable to or containing similar requirements include but are not limited to:

1. 30 USC 801, MSHA regulations
2. 33 USC 1151-75 Water Pollution Control Act
3. Chapter 20, Article 6 *West Virginia Code*—"Surface Mining and Reclamation Control Act"
4. Chapter 20 Article 6C, *West Virginia Code*—"The Coal Refuse Disposal Control Act"
5. "Pennsylvania Clean Streams Law," 35 *Pa. Stat. Anon,* Sec. 691.1 *et seq.*
6. "Solid Waste Management Act," 35 *Pa. Stat. Anon,* Sec. 6001 *et seq.*
7. Title 25 *Pennsylvania Code,* Chs. 95, 97, 101, 125.
8. Ch. 20 Art. 5, *W.Va. Code,* "Water Pollution Control Act"
9. 40 CFR 136. "Protection of the Environment"

Proposed Section 816.71 requires controlled placement utilizing current prudent engineering practices utilized in embankment construction for all types of permanent fills.

Maintaining stability protects the public and the environment from the adverse results of failure. Compatability with surroundings and the approved postmining land use minimizes the adverse effects of mining as required in the Act. American Society of Civil Engineers, 1977; Tromson, 11972; DOE, 1977, 1978; Eliassen, 1969, Greer, 1960; Grin, 1974; National Coal Board, 1970; Skelly and Loy, 1977; Weight, 1966; West Virginia DNR, 1975; and Wood, 1976.

Proper engineering practices require that all organic material be removed to allow for proper foundation preparation before fill placement, and to prevent the existence of weak, unstable zones within the embankment. Topsoil must be stockpiled for later use as required by the American Society of Civil Engineers, 1977; American Society of Civil Engineers, 1972; Bishop, 1973; DOE, 1977; Greer, 1960; Havers, 1971; Huang, 1978; Kimble, 1974; Lambe, 1969; Leonards, 1962; National Coal Board, 1970; USSCS, 1969; Taylor, 1948; Terzaghi, 1967; USBOR, 1973; US Corps of Engineers, 1971; USDA, (no date); USDOI, 1976; USN, 1963; West Virginia DNR, 1975; and Wood, 1976.

Slope protection and vegetation of all unprotected areas should be provided contemporaneously with construction, consistent with standard maintenance procedures for permanent structures under construction. Adams, et al., 1974; Bonny and Frein, 1973; Brundage, 1974; BOM, 1973; Capp, et al., 1975; Capp and Gillmore, 1974; Capp and Adams, 1971; Charmbury and Chubb, 1973; Coalgate et al., 1973; Czapowskyj and Writer, 1970; Czapowskyz and Sowa, 1973; Davidson, 1974; Dean, 1972; Dean and Havens, 1971; Department of Energy (Canada), 1972; D'Appolonia, 1975; Eigenbrod, 1971; Eliassen, 1969; James, 1966; Jones et al., 1973; Leroy, 1972; National ASN Association, 1972; National Coal Board, 1970; Peterson and Geshwind, 1973; Riley and Rinier, 1972; SCS, 1974; Sorrell, 1974; Spirik, 1973; Thompson and Hutnik, 1971; Welsh and Hutnik, 1972; White et al., 1973; and Wood and Thiegood, 1955.

The prohibition against depressions or impoundments is proposed to preserve the structural integrity of the fill by limiting sources of water introduced into the embankment.

Limiting the use of terraces to sites where approved by the regulatory authority as necessary to control erosion or enhance stability is proposed to maintain embankment outslopes compatible with the surroundings.

The use of keyway cuts and buttresses is intended to increase the stability of the embankment where steep foundation conditions necessitate special treatment to resist the sliding movement created by the weight of the fill. Bishop, 1973; Chirionis, 1972, Curry, 1977; DOE, 1977; Huang, 1978; Lambe, 1969; Leggett, 1962; National Coal Board, 1970; Skelly and Loy, 1977; SCS, 1969; Taylor, 1948; Terzaghi and Peck, 1967; USBOR, 1973; U.S. Corps of Engineers, 1971; USN, 1963; Weigle, 1966; and Wood, 1976.

To monitor potentially hazardous changes effectively, frequent inspections are mandatory. The proposed inspection procedure is standard for embankment construction, both in content and frequency. The procedures for maintaining records of inspection, notification of the regulatory authority, and certification of the construction by a registered professional engineer provides quality control records which indicate the close scrutiny necessary to provide for proper construction. (See 30 USC 77.215-3; WV Code; PA Code.)

Proposed Subsection 816.71(l) requires subdrain networks which allow for control of all ground water beneath a disposal area. Lack of control can result in ground water saturating portions of the fill and, as a consequence, endangering the structural integrity of the embankment. The rock underdrain fill construction is designed to keep water from infiltrating into the body of the fill.

The proposed Subsection 816.71(n) requires that the foundation be analyzed to assure the site is or can be utilized without danger of foundation problems during or after construction. Improper foundation treatment could lead to instability and variance from the purpose of the Act. American Society of Civil Engineers, 1977; American Society of Civil Engineers, 1969; Bishop, 1962; Dept. of Energy (Canada), 1972; D'Appolonia, 1975; Forrester and Whittaker, 1976; Hvorslev, 1948; Lambe et al., 1969; Leggett, 1962; Leonards, 1962; National Coal Board, 1970; Taylor, 1948; Terzaghi & Peck, 1967; Terzaghi, 1943; USDOI, 1976; USDOI, 1968; U.S. Navy Bureau of Yards and Docks, 1963; Wood et al., 1976; Thomson et al., 1972; and Department of Energy (Canada), 1977.

Proposed Section 816.72 requires that valley fills shall have a minimum static factor of safety of 1.5. Reduced factor of safety requirements for remote areas were considered as alternatives, but the size and variability of sites and the potential for significant environmental harm negated the validity of the alternative. The 1.5 safety factor was chosen over lower values to insure an adequate margin of safety. A 1.5 safety factor is standard engineering practice for structures located where failure could cause loss of life, property damage, or significant environmental harm. American Society of Civil Engineers, 1977; ASCE, 1969; Bishop, 1973; Bishop 1955; DOE (Canada), 1972; D'Appolonia, 1975; Lambe and Whitman, 1969; Nat. Coal Board, 1970; Taylor, 1948; Terzaghi & Peck, 1967; Terzaghi, 1943; USDOI, 1976; U.S. Navy, 1963; Wood, 1976; Thompson et al., 1972; and DOE (Canada) 1977.

Proposed Subsection 816.72(b) outlines subdrain requirements. The main rock underdrain is constructed to provide passage for water infiltrating the fill. It is a common, accepted engineering and construction practice never to allow surface water to infiltrate a soil mass and to minimize the hydrostatic pressure within the fill. Lateral interceptors ensure collection and transport of all major sources of ground water beneath the disposal area.

The prerequisite for drains in areas of actual or projected seepage implements requirements in Section 515(b)(22)(C) of the Act and parallels standard engineering requirements. American Society of Civil Engineers, 1977; American Society of Civil Engineers, 1972; Ceceigren, 1967; Chassie and Goughnour, 1976; Chironis, 1977; DOE, 1977; Green and Raney, 1975;

Hopkins et al., 1975; Huang et al., 1975; Lambe and Whitman, 1969; Leggett, 1962; Leonards, 1972; National Coal Board, 1970; Skelly and Loy, 1977; SCS, 1969; SCS, 1974; SCS, 1975; Taylor, 1948; Terzaghi and Peck, 1967; Terzaghi, 1943; USBOR, 1973; U.S. Corps. of Engineers, 1971; U.S. Corps of Engineers, 1952; USN, 1963; Weigle, 1966; West Virginia DNR, 1975; and Wood, 1976.

Filters must be provided which are compatible with the fill, the foundation, and each other. This is a standard engineering criterion which premises the potential for blockage of drains by migration of fine materials.

The sizing criteria are derived from standard drain design in texts and publications, and from performance of actual drains in the field. American Society of Civil Engineers, 1977; American Society of Civil Engineers, 1972; Cedergren, 1967; Chassie, 1976; Chironis, 1977; DOE, 1977; Greene and Raney, 1975; Hopkins, et al., 1975; Huang, 1975; Huang, 1978; Lambe 1969; Leggett, 1962; Leonards, 1962; National Coal Board, 1970; Skelly and Loy, 1977; SCS, 1969; SCS, 1974; SCS, 1975; Taylor, 1948; Terzaghi, 1967; Terzaghi, 1943; USBOR.

Subdrain material must be durable to prevent degradation which could lead to blockage and subsequent failure. This is a standard design criterion for drain design and construction. Astin, 1976; Cedergren, 1967; DOE, 1977; Lambe, 1969; Lambe, 1951; Leonards, 1962; SCS, 1969; SCS, 1975; Taylor, 1948; Terzaghi and Peck, 1967; USBOR, 1973; U.S. Corps of Engineers, 1952; USDA (no date); and USN, 1963.

The proposed 18 inch lift requirement is based on additional information which has been gathered on the process of constructing earth-fill structures in a series of horizontal lifts. This information shows that a variety of lift thicknesses was required for fill construction by different methods and contractors. The more conservative requirements allowed lifts only a few inches thick between compactions, the less conservative allowed up to 6 feet. Most authorities agreed that it was the compaction and removal of pore spaces that was important for fill stability. Because the agencies authorizing the construction of earth-fill dams and groins, both of which have possible failure consequences similar to those of fills, require lift thicknesses of 3 to 8 inches and because the agencies have extensive experience and emperical evidence for their decisions, the Office has proposed an 18 inch change of the rule on lift thickness, which varies from the interim program regulations which require 4 foot lifts. If the operator can show by continuous in place density monitoring that the spoil density specified in the design certified by a registered professional engineer is being attained throughout each lift thickness employed, thicker lifts will be allowed not to exceed 4 feet in thickness. American Society of Civil Engineers, 1977; American Society of Civil Engineers, 1972; Astin, (no date); Bishop and Henkel, Goughnour, 1976; Chironis, 1977; Thomson and Podon, 1972; Cummins et al., 1965; Curtis, 1973; Depaid, 1974; DOE, 1977; Denevich et al., 1976; Holtzard Gibbs, 1956; Hvorslev, 1948; Huang et al., 1975; Huang, 1978; Kimble, 1974; Lambe, 1969; Lambe, 1951; May, 1963; Meyerhof, 1970; Superfesky and Williams, 1978; Taylor, 1948; Terzaghi and Peck, 1967; Terzaghi, 1943; USBOR, 1973; U.S. Corp of Engineers, 1971; USN, 1963; and Weigle, 1966; Grim and Hill (1974); Skelly and Loy (1978).

Diversion of runoff is required to prevent the erosion of a coal processing waste disposal area, or other water which could decrease the overall stability of the site. A 6-hour duration storm was considered, but the 24-hour storm produces a peak substantially larger in total volume than the 6-hour hydrograph. American Society of Civil Engineers, 1969; Corps of Engineers, 1952; Department of Energy (Canada), 1972; D'Appolonia, 1975; Good et al., 1970; Leonards, 1962; Marks, 1975; SCS, 1969; SCS, 1975; Terzgaghi, 1967; USDOI, 1976; U.S. Navy Bureau of Yards and Docks, 1963; and West Virginia Department of Natural Resources, (no date). Brater and King, 1976; Chow, 1959; Davis and Sovenson, 1969; Department of Energy (Canada), 1972.

The proposal to allow terraces is intended to break the length of the slope, thus allowing the water to maintain low, nonerosive velocities. All slope values proposed are standard slopes for fill construction which are flat enough to limit or retard erosion. American Society of Civil Engineers, 1972; Chironis, 1977; Aury, 1977; Eliassen, 1969; Greene, 1960; Greene, 1975; Grim, 1974; Kimble, 1974; SCS, 1969; USDA, (no date); and West Virginia DNR, 1975.

A maximum 2:1, 1v:2h outslope limitation is proposed, as also specified by MSHA in 30 CFR 77.214. This slope reflects combinations of accessability and stability.

Proposed Section 816.73 contains the requirement for placing spoil fills in the uppermost reaches of the drainage area to reduce the size of drainage areas necessary to be controlled. The rock-core chimney drain allowance was based on the following course of events. On December 13, 1977, final rules were adopted for the interim surface mining reclamation and enforcement program developed pursuant to the Act. These rules covered the disposal of spoil from surface mining in areas other than mine workings or excavations, and specifically authorized the rock underdrain system of fill construction. Following adoption of rules, the Office received petitions for change of the Federal rules affecting head-of-hollow fills. The Office instituted an investigation of the allegations of the petitions, which result in these proposed revisions of the earlier rules.

Petitions from the State of West Virginia and from coal mine operators in that State alleged that the Office was being too narrow in defining only one construction method for building head-of-hollow fills. They claimed that the "rock-core system" authorized in West Virginia provided as much, or more, protection as the "rock-underdrain system" in the interim program. Several professional engineers have expressed concern with long-term clogging of the rock core by fine-grained sediment in the drainage and in some cases piping (internal erosion) caused by the flow of water within the fill which could lead to instability and potential failure of the fill. To date the Office is not convinced that rock core fills are potentially less stable than the rock underdrain fills. However, it may be that the total rock core described in the West Virginia method is not necessary.

Some engineers have expressed doubt that the rigorous West Virginia construction requirements could be adequately monitored in a State that was just beginning a strict inspection program and that inadequate engineering practices would be more likely to result in failure in the rock core system. It is critical that the rock core maintain its permeability throughout. If one impermeable section is placed or if a section becomes impermeable, the result could be disastrous. On the basis of the investigation, the office is proposing a permanent program revision to the regulations permitting the rock core system of head-of-hollow fills to be used at the discretion of the regulatory authority with adequate inspection and supervision. At the same time, the Office is instituting a formal study through the National Academy of Engineering to investigate, in depth, the potential for failure of the types of head-of-hollow fills.

The rock-core drain system is designed to direct water falling on the surface of the fill to a central rock core by means of surface grading. The rock core extends from the toe to the head of the fill and from the base to the surface of the fill. A system of lateral underdrains will dispose of water from seeps emerging beneath the fill. Filters are provided for the core and subdrains. A drainage pocket of less

than 10,000 gallon capacity at the head of the fill is designed to handle surges from heavy runoff conditions.

The major advantage of the rock core construction appears to be its ability to cope with long-term differential settlement of the fill that results in a surface grade toward the center of the fill, where settlement is usually greatest. In areas where such settlement is unavoidable, the regulatory authority might specify rock core drains as the construction method; in other areas, diversion of the water from the fill might be the preferred construction method. Other criteria such as side hill conditions, shot spacing, or haulage methods could affect the design of the fill. For both cases, the key to preventing erosion is adequate design and construction of diversion and surface drainage systems. In all cases, only the precipation that falls on a fill may run over it. The path such precipitation travels should be the one that minimizes erosion. Lateral interceptors ensure collection and transport of all major sources of ground water beneath the disposal area. This is a standard design criterion for drains and may be found in numerous soil mechanics and engineering references. Greene and Raney, 1975; Skelly and Loy, 1977, 1978; and West Virginia DNR, 1975. In no case may a rock core method be used where there is drainage from above the fill.

§ 816.79 Protection of underground mining.

Proposed Section 816.79 is intended to protect the health and safety of miners working in surface and underground mines adjacent to each other and to assure that economically feasible underground mining is not foreclosed by nearby surface mining activities, causing both a loss of resource recovery and possible environmental degradation.

This Section is proposed under the authority of Sections 102, 201, 501, 503, 504, 515, and 516 of the Act.

As specified in Section 515(b)(12) of the Act, proposed Section 816.79 would create a 500-foot separation of surface mining activity and underground mine workings. Variances from this distance would be left to the discretion of the regulatory authority, the Mine Safety and Health Administration (MSHA) and any appropriate State safety agency. An alternative considered was specifying unique situations where the proximity limitation would be waived, such as recovery of partially mined coal deposits in danger of wastage through mine fires. The Office believes that each case would be different enough to thwart the utility of an extended list of special cases; thus this alternative was rejected. A second alternative considered was the complete reliance upon MSHA regulations for mines beyond the 500-foot limit. This alternative was rejected because the drafters believe that a joint decision on close proximity of surface and underground mining is warranted due to the different mandates of OSM and MSHA.

§§ 816.81–816.88 Coal processing waste.

The increased production of waste from mechanized mining and recent waste structure failures underscore the need for regulation of the siting, construction and reclamation of coal waste piles.

The proposed regulations represent an extension of the Mine Safety and Health Administration (MSHA) regulations on coal refuse under 30 CFR 77.214–77.215 and the current practices of standard engineering.

In addition to disposal under these sections, the proposed permanent program regulations would allow disposal of coal processing waste in fills (proposed paragraph 816.71(k)(1)) and in and behind (proposed Sections 816.91–816.93).

Proposed sections 816.81–816.88 are authorized in the act in sections 102, 201, 501, 503, 504, 506, 507, 508, 510, 515, and 517.

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121. "Colliery Spoiltips *After Aberfga*", Thomson, G. McKecknie; Rodin, S., The Institution Civil Engineers, 1972.

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State and Federal legislation containing similar requirements include:

(1) *30 USC 801* Section 77.214 "Refuse piles".

(2) *30 USC 801* Section 77.215 "Refuse piles; construction requirements".

(3) *33 USC 1151-1175* The Federal Water Pollution Control Act.

(4) Chapter 20 Article 6C, "West Virginia Code", "the Refuse Disposal Control Act."

(5) "Pennsylvania Clean Streams Law", 35 Pa. Stat. Anno. Sec. 691.1 et seq.

(6) "Solid Waste Management Act", 35 Pa. Stat. Anno., Sec. 4001 et seq.

(7) "Pennsylvania Air Pollution Control Act" 35 Pa. Stat. Anno., Sec. 4001 et seq.

(8) Title 25 "Pennsylvania Code", Chs. 95, 97, 101, 125.

(9) Ch. 20 Art. 5, "W.Va. Code", "Water Pollution Control Act."

(10) Ch. 63 "W.Va. Code"; and Amended under Ch. 13, W.Va. Code "W.Va. Air Pollution Control Act".

Controlled placement requirements reflect the current prudent engineering practices utilized in embankment construction for all types of permanent fills. The requirements of proposed Sections 816.71–816.72, incorporated by reference in these proposed Sections, are discussed in an earlier portion of the Preamble. See also Bonny and Frein, 1973, Bureau of Mines, 1973; Comptroller General of U.S. (acting) 1977; Department of Energy (Canada), 1972; D'Appolonia, 1975; D'Appolonia, 1973; Eliassen, 1969; Greer, 1960; Glouee, 1971; Governor's Ad Hoc Committee of Inquiry—West Virginia, 1972; Moulton, 1973; National Coal Board, 1970; U.S. Department of Commerce, 1976; U.S. Department of Interior, 1973; Wood, et al. 1976; Thomas, et al, 1972; and Department of Energy (Canada), 1977.

Allowances made for waste coming from operations outside the permit area under proposed subsection 816.81(b) conforms to practices currently utilized in the industry, and minimizes the number of disposal areas and the subsequent disturbances resulting therefrom.

Inspections are required under Section 816.82. They assure observance of any physical changes which may occur that are or could be detrimental to the integrity of the site, and potentially hazardous to life, property, or the environment in the vicinity of the site. The inspection frequency was chosen because of the large amounts of refuse being produced at any mine or group of mines which consequently leads to rapidly changing configurations of each disposal area. To effectively monitor these changes frequent inspections are mandatory. The inspection procedure is standard for embankment construction, both in content and frequency. Bonny and Frein, 1973; Clough, 1972; Comptroller General of the U.S. (acting), 1977; Dept. of Energy (Canada), 1972; D'Appolonia, 1975; National Coal Board, 1970; U.S.D.O.I., 1975; and Wood, et al., 1976.

The proposed procedures for maintaining records of inspection and notification of the regulatory authority in potential or imminent emergency situations would allow for frequent monitoring or formulation of remedial action in a potentially hazardous condition, and for the instituting of emergency action and subsequent safeguarding of life, property and the environment.

Proposed Section 816.83 addresses required water control measures. Subdrain networks allow for control of all groundwater beneath a disposal area. Lack of control can result in groundwater saturating portions of the fill and as a consequence, endangering the structural integrity of the embankment. Alternatives to properly designed subdrains such as randomly dumped, uncontrolled drains, were considered. The need for permanent drains in a permanent fill, designed to function with a minimum probability of failure, overrode the simplistic approach of undesigned drains. America Society of Civil Engineers, 1969; Cedergren, 1967; Coalgate, et al., 1973; Corps of Engineers, 1952; Department of Energy (Canada), 1972; D'Appolonia, 1976; Harr, 1962; Leonards, 1962; USDOI, 1973; and West Virginia Department of National Resources, (no date).

Coal processing waste is to be placed in lifts not to exceed 8 inches and compacted to a dry density no less than 90% of Standard Proctor. All embankment construction projects must utilize standards. The lift thickness required was determined to be the most suitable for use in placement of coal processing waste without compromising the norms of engineering practice.

The 8 inch lift was the accepted alternative over other lift thicknesses because of the type of equipment normally utilized in coal processing waste disposal operation, e.g., bulldozers cannot compact effectively lifts any thicker than 8 inches. The 90 percent Proctor requirement assures prevention of combustion by airflow reduction through the voids.

The Proctor density requirement serves several purposes. It:

(a) Acts as an easily measured standard throughout the industry;

(b) Allows for achievement of a density suitable for long-term stability;

(c) Assists in retarding the movement of airflow, this preventing combustion;

(d) Achieves a surface resistant to significant erosion; and

(e) Accommodates a greater amount of waste in a smaller area.

The extra space for disposal gained by controlled placement tends to outweigh any other alternatives, and is in direct agreement with the intent of the Act to limit areas disturbed by mining. ASCE, 1977; ASCE, 1969; ASTM, 1965; Bishop, 1962; Bishop, 1973; DOE (Canada), 1972; D'Appolonia, 1975; D'Appolonia, 1976; D'Appolonia, 1973; Eliassen, 1969; Geer, 1960; Glover, 1971; Havers and Stubbs, 1971; Lambe and Whitman, 1969; Lambe, 1951; Moulton, 1973; Nat. Coal Board, 1970; Pettibone and Vealv, 1971; SCS, 1969-a; Taylor, 1948; Terzaghi & Peck, 1967; Terzangni, 1943; USDOC, 1976; USDOI, 1973; USDOI, 1976; USDOI, 1974; USDOI, 1975; USDOI, 1968; U.S. Navy, 1963; Wood et al., 1976; Thomson et at., 1972; and DOE (Canada), 1977.

Covering of graded portions of the processing waste disposal area:

(1) Promotes vegetation;

(2) Seals the fill from percolation of surface runoff and further retards airflow;

(3) Keeps reclamation current with construction; and

(4) Limits runoff of water which may otherwise carry materials not in balance with effluent standards.

Alternative thicknesses to the 4-foot standard selected were considered for suitable material cover, but were not supported from past practices or the literature. A proposal for strict requirement of soil only in the cover was rejected due to literature identifying other suitable cover types and sites where availability of soil was a problem. Adams et al., 1974; Beundage, 1974; Calhoun, 2968; Capp et al., 2975; Capp and Gillmore, 1974; Coalgate et al., 1973; Czapowskyj and Writer, 1970; Czapowskrj and Sowa, 1973; Davidson, 1974; Dean and Havens, 1972; Dean and Havens, 1971; DOE (Canada), 1972; D'Appolonia, 1975; Eigenbrod, 1971; Glover, 1971; James, 1966; Jones et al., 1973; Leroy, 1972; Nat. Coal Board, 1970; Peverson and Gschwind, 1973; Sorrell, 1974; Spirik, 1973; Thompson and Hutnik, 1971; Welsh and Hutnik, 1972; White et al., 1973; and Wood and Thirgood, 1955.

Proposed Section 816.86 relates to burning waste. Numerous accidents and deaths in operations in and around burning coal waste necessitate extreme caution when dealing with fire control or other operations to safeguard life, property and the environment. Comp., Gen. of U.S. (acting), 1977; DOE (Canada), 1972; D'Appolonia, 1975; Governors Ad Hoc Comm.

of Inquiry-West Virginia, 1972; Harrington and East, 1948; Hjeblex, 1950; Hodges, 1963; and McNay, 1971.

The list of fire-extinguishment methods used in the Section is not intended to be exhaustive. Literature supporting these methods includes references: Andreuzzi, 1970; Barber, 1972; Coalgate et al., 1973; DOE (Canada), 1972; Dixon, 1967; D'Appolonia, 1975; Harringon and East, 1948; Hebley, 1955; Hebley, 1948; Hebley, 1950; Hebley, 1956; Henderson, 1969; McNay, 1971; Magnuson and Baker, 1974; and Russell, 1964.

Proposed Section 816.87 would allow utilization of "reddog" after approval by the regulatory authority of plans submitted by a qualified engineer. Reddog removal operations have historically been plagued by dust explosions, cut high-wall collapses, loss of equipment and personnel into voids resulting from volume change during burning, etc. The intent of this Section is to protect the operator and persons surrounding areas from these hazards, while also requiring reclamation and other operational procedures consistent with the Act.

Prohibition of the use of coal processing waste offsite without the specific approval of the regulatory authority, limits the use of reddog to those areas where it will not affect the health and safety of the public, or degrade the environment, in keeping with Section 102 of the Act.

Proposed Section 816.88 requires that waste disposal underground must be approved by the regulatory authority and conducted in accordance with a proper plan. This allows for some elimination of above-ground areas and potentially from abatement of subsidence related problems. A plan is required to protect the operator from dangerous situations which might arise in placement of waste into old mine workings and also to insure the operation could not affect the environment by creating down-dip discharges into adjacent watersheds or ground water systems. D'Appolonia, 1975; Glover, 1971; and NAS, 1975.

§ 816.89 Disposal of noncoal wastes.

This proposed Section specifies requirements for the procedures to be followed in disposal of noncoal wastes generated from surface coal mining operations. The utilization of these procedures will minimize environmental degradation caused by improper disposal procedures.

The term "noncoal waste" is used instead of the more general term "residual materials." This was done in an attempt to define more specifically the type of waste described in this Section.

The authority for this proposed Section is found in Sections 102, 201, 501, 503, 504, and 515 of the Act.

Literature used in the preparation of the requirements for the disposal of noncoal wastes include:

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Many types of noncoal wastes are generated from coal mining operations. Specific attention must be given to these solid wastes in order to minimize surface and ground water pollution. Environmentally acceptable methods for the disposal of noncoal wastes include sanitary landfills and industrial waste disposal procedures. Although unlikely, noncoal wastefills can catch on fire (Sorg and Hickman, 1970, page 24). The need exists to maintain an earthen barrier between the disposal site and any coal to minimize any chance of a fire in the coal.

Several options for the handling and disposal of noncoal wastes were considered. First, the alternative of requiring that all such wastes be disposed of on the minesite was considered and rejected on the grounds that environmentally sound offsite disposal should not be precluded.

Another alternative which was reviewed concerned the utilization of surface mines for approved centrally located sites for disposal of noncoal waste by other mines, other industries, and even municipalities, in areas where suitable physiographic and hydrologic conditions did not provide sufficient alternative disposal sites. The proposed regulations do not specifically address this issue, and public comment is solicited on the appropriateness of opening minesites to outsiders for dumping. Commenters should address both the appropriate regulatory scheme to be established and the kinds of expertise the Office would need to develop and adequately enforce the controls imposed.

§ 816.91-816.93 Coal processing waste: dams and embankments.

Recent dam failures have sparked a movement nationwide to evaluate the hazard potential presented by dams. The proposed Sections 816.91-816.93 are intended to prevent the instability and failure of coal processing waste dams leading to excessive sedimentation of surface water systems, contamination of ground and surface water with acid-forming or toxic-forming or otherwise harmful substances, or hazards to life and property, such as the Buffalo Creek failure in 1972. As promulgated in 30 CFR, 77.216, MSHA has regulated water, sediment, or slurry impounding structures which fulfilled minimum size and storage volume criteria. Those provisions regulate structures to protect miners on mine property, whereas proposed Sections 816.91-816.93 would augment the protection of, public health, encompassing safety and environmental protection. If adopted the proposed Sections would pertain to dams and embankments that are totally or partially constructed of coal processing waste or that impound coal processing waste. These provisions would not apply to earth, concrete, or other types of dams which may exist in the permit area unless they are intended to impound coal processing waste. Permanent water impoundments however, would be covered under Section 816.49, and sediment control impounding structures would be regulated under Section 816.46.

These proposed regulations would cover all dams and embankments constructed of coal processing wastes whether temporary or permanent and whether or not they meet size or other criteria of Section 77.216 of this Title. The regulations would apply to all stages of design, location, construction, operation, maintenance, enlargement, modification, removal, or abandonment of the structures.

Authority for the proposed regulations is found in the following Sections of the Act 102, 201, 501, 503, 504, 515 and 517.

Literature utilized in preparation of these Sections includes:

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3. American Society of Civil Engineers (ASCE), "Inspection, Maintenance and Rehabilitation of Old Dams," *Proceedings,* Engineering Foundation Conference, September 1973, Published 1974.

4. American Society of Civil Engineers, "Stability and Performance of Slopes and Embankments," August 1969.

5. American Society of Civil Engineers, *Stability of Rock Cuts,* Edited by E.J. Cording, 1972.

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114. West Virginia Dept. of Natural Resources, "Coal Refuse and Dam Control Section", Refuse Disposal Area (non-impounding) Requirements; "Dam Safety Review Checklist."

115. Wood, L.E. et al., "Guidelines for Compacted Shale Embankments", Purdue University, 1976.

116. Wood, R.F., and Thirgood, J.V., "Tree Planting on Colliery Spoil Heaps," *Colliery Engineering* 32 (382), 1955, pp. 512-516.

117. U.S. Navy Bureau of Yards and Docks, "Soil Mechanics, Foundations and Earth Structures," DM-7, 1963.

118. Department of Energy, Mines and Resources, Canada, *Pit Slope Manual—Chapter 9—Waste Embankments,* CANMET Report 77-01; Mining Research Laboratories, 1977.

State and Federal legislation and regulations containing similar requirements include:

1. 30 CFR 77.216 "Water, sediment or slurry impoundments and impounding structures; general."

2. 30 CFR 77.216-1 "Water, sediment or slurry impoundments and impounding structures; identification."

3. 30 CFR 77.216-2 "Water, sediment or slurry impoundments and impounding structures; minimum plan requirements; changes or modifications; certification."

4. 30 CFR 77.216-3 "Water, sediment or slurry impoundments; inspection requirements; correction of hazards; program requirements."

5. 33 USC 1151-75 "The Federal Water Pollution Control Act."

6. Chapter 20 Article 5D of the *WV Code,* "The Dam Control Act."

7. Chapter 20 Article 6C, *West Virginia Code,* "The Coal Refuse Disposal Control Act."

8. "Pennsylvania Clean Streams Law," 35 *Pa. Stat. Anon.,* Sec. 6001 et seq.

9. "Pennsylvania Air Pollution Control Act", 35 *Pa. Stat. Anon.,* Sec. 4001 et seq.

10. Title 25 *Pennsylvania Code,* Chs. 95, 97, 101, 125.

11. Ch 20 Art. 5, *WV Code,* "Water Pollution Control Act."

12. Ch. 63 *WV Code;* and Amended under Ch. 13, *WV Code,* "WV Air Pollution Control Act."

Proposed Section 816.91 would adopt inspection requirements by reference to 30 CFR 77.216-3. An inspection program is necessary to discern any changes which could indicate problems developing with the structure. American Society of Civil Engineers, 1973; Bonny, J. B. and Frein, J. P., 1973; Clough, R. H., 1972; Comptroller General of the U.S. (acting), 1977; E. D'Appolonia, 1975; Sherard, *et al,* 1963; USBR, 1973; W. Va. Dept. of Nat. Resources (no date).

Maintenance of dams is essential to assure their continued stability and proper performance in accordance with the engineering and environmental standards. ASCE, 1973, E. D'Appolonia, 1975; S. Letard, *et al,* 1963; USBR 1973; W. Va. Dept of Nat. Resources, (no date); Dept of Energy, Mines and Resources, Canada, 1977.

Certification annually is currently required by many State and Federal dam control agencies. An alternative to annual certification, such as is currently utilized by the Federal Power Commission Reporting requirements, could be promulgated to allow less frequent certification after the performance of the structure has been proven.

This alternative would require postive evidence of continued coal processing waste dam stability before application to a specific structure. The Office has not adopted this alternative in these proposed regulations, and public comment is solicited on the appropriateness of the alternative in particular circumstances and objective criteria to prevent abuse.

ASCE, 1973; Compt. Gen. of the U.S., 1977; D'Appolonia, E. 1975; Sherrard, *et al* 1963; USBR, 1973; USWB, 1963; W. Va. Dept. of Nat. Resources, (no date); DOE, Canada, 1977; WV Code; Pa. Code; 30 CFR 77.216).

Proposed Section 816.92 would require clearing and grubbing, and the removal of organic material and combustibles, a standard construction practice which is required in various regulations, texts and publications pertaining to waste disposal and dam construction. Compt. Gen. of the U.S., 1977; E. D'Appolonia, 1975; R. C. Hirschfield, S. J. Paulous, 1973; Joel D. Justin *et al* 1945; T. W. Lambe and R. V. Whitman, 1969; G. A. Leonards, 1962; MBMRC, 1972; NCB, 1972; Sherard, *et al,* 1963; SCS, 1969; USBR, 1973; USDOC, 1966; W. Va. DNR, (no date); L. E. Woods, *et al* 1976; K. Tetzaghi and R. B. Peck, 1967; USBR, 1978, U.S. DOC, 1976; U.S. DOT, 1973; U.S. DOC, 1973; H. H. Russell, 1964; D. Hartington and J. H. East, 1948; L. M. McNay, 1971; M. O. Magnuson and E. C. Baker, 1974;

The diversion of the 100-year 24-hour storm is appropriate for permanent structures or structures which can constitute hazards to people, property and the environment. Diversion of runoff precludes erosion or other structural problems with the embankment. ASCE 1972; Batter, E. F. and King H. W., 1976; BOM, 1973; Cassagrande, A. and MacIver, B. N., Colgate, J. L. *et al,* 1973; Davis C. V. and Sauerson, FHA 1977; Glover, G. H. 1971; Henderson, F. M., 1969; Hjelmfelt, A. T., Jr. and Cessidy, J. J. 1975; Justin, Joel D. *et al,* 1945 Linsley, R. K. et al., 1955; Linsley, R. K., et al., 1972; MBMRC Centre, 1972; Morris, H. M., 1972; Natl. Coal Board, 1970; Peterka, A. J., 1963; Rouse, H., 1950; Rouse, H., 1967; Sherard, et al., 1963; SCS, 1968; SCS, 1969; USBR, 1973; U.S. DOC, 1976; U.S. DOI, 1976; U.S. DOT, 1975; USWB, 1973; W. Va. DNR, (no date); Wood, L. E. *et al,* 1976; DOE, Canada, 1977. Sediment control would be required to meet both effluent limitations under 33 USC 1151-75 and Section 515(b)(10)(B)(i) & (ii) of the Act.

Under the proposed regulation, slope protection, sediment control, and vegetation of all unprotected areas would be accomplished contemporaneously with construction in line with standard operational procedures for permanent structures under construction. ASCE, 1977; Brundage, R. S., 1974; BOM, 1973; Capp, J. P. *et al,* 1975; Capp, J. P. and Gillmore D. W., 19; Colgate, J. L. *et al,* 1973; Davidson, W. H., 1974; Dean, D. C. and Havens, R., 1972; Dean, D. C. and Havens, S. R., 1971; D'Appolonia, E. 1975; James, A. L., 1966; Leroy, J. C., 1972; Riley, C. V. and Rinier, J. A., 1972; SCS, 1974; Wood, L. E., et al., 1976; DOE, Canada, 1977; Ramsey, J. P., 1970; Martin, J. F., 1974.

Proposed Section 816.93 would prohibit use of waste in dam construction, unless proven as a suitable fill material, in accordance with standard engineering procedure. In accordance with sound practice, material which fails to exhibit the proper strength parameters necessary to achieve stability would not be allowed for use in dam construction. ASCE, 1977; ASCE, 1969; Bishop, A. W., and Henkel, D. J., 1962; Bishop, A. W., 1973; Cassagrande, A. and MacIver, B. N., 1970; Corps of Engineers, 1960; D'Appolonia, 1975; Hirschfield, R. C., and Poulous, S. J., 1973; Huorselv, J., 1948; Justin, Joel, D. *et al,* 1945; Kealy, C. D. and Williams, R. E., 1969; Kealy, C. D., et al, (no date); Lambe, T. W., and Whitman, R. V., 1969; Mines Branch Mining and Research Center, 1972; Moulton, Lyle K., 1973; Natl. Coal Board, 1970; Natl. Coal Board, 1973; National Coal Board, 1972; Pettibone, H. C., and Kealy, C. D., 1971; Taylor, D. W., 1948; Terzaghi, K., and Peck, R. B., 1967; Terzaghi, K., 1943; USBR, 1973; USBR, 1968; U.S. DOI, BOM, 1974; U.S. DOI, BOM 1973; USDOI, 1976; USDOIBOM, 1974; USDOIBOM, 1975; W. Va. DNR (no date); Wood, L. E., *et al,* 1976; DOE, Canada, 1977.

The Probable Maximum Precipitation (PMP) is the current design standard utilized by numerous State

and Federal agencies as the hydrologic criterion for dams. Alternatives for smaller design storms could be considered on a case-by-case basis if the criteria imposed by Section 816.93(b) can be demonstrated as applicable. ASCE, 1977; Chow, V. T., 1964; Corps of Engineers, 1975; D'Appolonia, 1975; Moulton, Lyle, K., 1973; National Coal Board, 1970; SCS, 1968; SCS, 1969; SCS, 1972; USBR, 1973; USCOLD, 1970; USDOI, 1976; USWB, 1963; W. Va. DNR, (no date); DOE, Canada, 1977.

Properly designed spillways are essential to ensure the hydrologic and subsequently structural adequacy of the structure. Inlet and outlet design allows for safe passage of runoff not stored in the reservoir with a minimum of disturbances and with maximum efficiency. ASCE, 1972; Brater, E. T., and King, H. W., 1976; Chow, V. T., 1964; Chow, V. T., 1959; Corps of Engineers, 1965; Davis, C. V., and Saversol, K. E., 1969; D'Appolonia, 1975; FHA, 1973; FHA, 1977; Henderson, F. M., 1969; Hjelmfelt, A. T., 1975; Hirschfield, R. C., and Poulous, S. J., 1973; Linsley, R. K. *et al*, 1949; Linsley, R. K., *et al* 1955; Morris, H. M., 1972; Newmark, N. M., 1965; Sherard, *et al*, 1963; SCS, 1975; USBPR, 1965; USBPR, 1970; USBR, 1973; USDOI, 1976; USDOTFHA, 1975; W.Va. DNR, (no date); DOE, Canada, 1974.

Three feet is a standard design freeboard utilized between design storm and top of dam elevations. The freeboard is intended to prevent overtopping by waves and also to counter frost action. Corps of Engineers, 1975; D'Appolonia, E., 1975; Hirschfield, R. C., and Poulos, S. J., 1973; USCOLD, 1970; SCS, 1972; U.S. DOA, 1976; USDOI, 1976; W. Va. DNR, (no date). Alternatives for smaller freeboard allowances were considered but rejected because of perceived need for prudence in designing a structure with so great a potential for harm. Dam design factors 100% PMP vs. 80% PMP and respectively 1 and 3 feet of freeboard, are virtually identical.

Factors of safety contained in proposed Subsection 816.93(e) are taken from standards currently used by various State and Federal agencies for construction and long term analyses. Dynamic requirements parallel the works of Algermissen for application of horizontal 'g' loads. Algermissen, 1969; Bishop, 1955; Cassagrande and MacIver, 1970; Cassagrande, 1937; Cedergren, 1967; U.S. Corps of Engineers, 1952; U.S. Corps of Engineers, 1960; D'Appolonia, 1975; D'Appolonia, 1976; Griffiths and King, 1965; Harv, 1962; Hirschfield and Poulos, 1973; Kealy and Soderberg, 1969; Kealy and Williams, 1971; Kealy and Williams, 1970; Kealy, et al., (no date); Lambe, and Whitman, 1969; Lambe, 1952; Marks, 1975; Mines Branch Mining Research Center, 1972; Morgenstern and Price, 1965; Nat. Coal Board, 1970; Newmark, 1965; Sherard, et al., 1963; SCS, 1973; Taylor, 1948; Terzaghi and Peck, 1967; Terrachi, 1943; Tolman, 1937, USBR, 1973; USDOI, 1973; USDOI, 1976; USDOI, 1974; USDOI, 1975; West Virginia Dept. of Natural Resources, (no date); Wood, et al., 1976; U.S. Navy, 1963; and DOE (Canada), 1977.

Foundation design is an integral part of any dam or embankment design. Lack of proper foundation information could lead to several types of physical failure of the structure. ASCE, 1977; ASCE, 1974; Bishop, 1973; Cassagrande and MacIver, 1970; U.S. Corps of Engineers, 1960; D'Appolonia, 1975; Forrester and Whittaker, 1976; Forrester and Whittaker, 1976; General Analytics, Inc., 1969; Hanna, 1973; Hirschfield and Poulos, 1973; Holland, 1965; Hvorslev, 1948; Justin, et al., 1945; Lambe and Whitman, 1969; Leonards, 1962; Taylor, 1948; Terzaghi and Peck, 1967; USBR, 1968; USDOI, 1976; USDOI, 1977; West Virginia Department of Natural Resources, (no date); DOE (Canada), 1977; and U.S. Navy, 1963.

Placing additional fill to allow for settlement during and after construction is a common engineering practice. This would give a final crest elevation of the embankment as designed, allowing for individual settlement after construction. Proper techniques for estimating settlement can be found in any standard text or state-of-the-art publication on dam design. D'Appolonia, 1975; Hirschfield and Poulos, 1973; Justin, et al., 1945; Lambe and Whitman, 1969; Mines Branch Mining Research Centre, 1972; Sherard, et al., 1963; SCS, 1969-a; Taylor, 1948; Terzaghi and Peck, 1967; USBR, 1973; USBR, 1968; West Virginia Dept. of Natural Resources, (no date); Wood, et al., 1976; U.S. Navy, 1963; and DOE (Canada), 1977.

The requirement for 90 percent drawdown of the storm water volume within 10 days is a standard engineering requirement for high-risk dams. This provision allows for evacuation of the storm water held in the reservoir during the design rainfall event, and satisfies two major design functions:

(a) Allows for "back-to-back" design storms. If the storm runoff was to be stored for any period of time, the occurrence of a second design rainfall, or even lesser storm, could overtop the dam embankment and subsequently initiate breaching and failure of the structure.

(b) Drawdown of the storm water precludes the upper portions of the embankment and surrounding natural slopes from achieving steady-state seepage. Therefore, the embankment's phreatic surface remains stable. Raising the phreatic surface increases the hydraulic gradient through the structure, potentially leading to internal erosion and saturation, thus greatly increasing the chances of failure. (D'Appolonia-M.E.S.A.; 1975; Bureau of Reclamation, 1973; Corps of Engineers 1971, 1952; Harr, 1962; USDA, SCS, 1972 USDI, BOM, 1976;

The requirement for signs and markers would be compatible with 30 CFR 77.215 with the standards of Section 816.11 of these regulations, and with 515(b) of the Act.

§ 816.95 Air resources protection.

Proposed Section 816.95 specifies some of the fugitive dust control measures available to coal operators and State regulatory authorities to achieve and maintain national ambient air quality standards and other applicable Federal and State air quality standards. This Section, in conjunction with Section 780.14, is proposed to implement, in particular, Sections 515(b)(4) and 508(a)(9) of the Act. Through the proposals of Sections 780.14 (a), (b), and (c) the operator would be given the flexibility to select appropriate fugitive dust control measures for its proposed surface coal mining operation. If the operator fails to submit an adequate fugitive dust control plan, the regulatory authority would be required to specify necessary fugitive dust control measures including but not limited to measures listed in Section 816.95. In requiring control measures, the regulatory authority would have to consider applicable air quality standards, climate, existing air quality, size and type of operation.

Statutory authority for this Section of the regulations is contained in Sections 102, 201, 501, 503, 507, 508, and 515 of the Act. Technical literature, State laws and regulations, and other materials which support this Section of the regulations are listed in the Preamble discussion to Section 780.14 of the regulations.

Fugitive dust control measure for the critical fugitive dust sources are listed in proposed Section 816.95.

Proposed paragraphs 816.95 (b)(1)-(9) would specify measures to reduce fugitive dust emitted as a result of wind action and vehicle traffic over haul and access roads. (*See* Mann, *Compilation of Air Pollutant Emission Factors* EPA AP-42 Part B. Section 11.2 Fugitive Sources (1975)). Proposed paragraphs 816.95(b)(10)-(20) address other appropriate air pollution control measures.

These proposed Sections find support in the following technical literature and regulations:

1. Report of the National Coal Policy Project, *Where We Agree* 206-207 (1978).

2. PEDCO Environmental, Inc., *Evaluation of Fugitive Dust Emissions From Mining*, 104–115, June 1976.

3. PEDCO Environmental Inc., *Identification of A Feasible Regulation for Controlling Localized Fugitive Dust Emissions*, AP–42 Table 1.1, (undated).

4. PEDCO Environmental Specialists, Inc., *A Review of State Regulations for Controlling Dust Emissions*, August 1976.

5. 40 CFR Section 51 Appendix B.

6. *EPA Table of Typical Fugitive Dust Control Measures Observed at Western Coal Mines.*

7. FEA PB–253, 254 *Impact of Significant Deterioration Proposals Upon West Surface Coal Mining Operations*, 1–3 May 1976.

Alternatives considered to the proposed fugitive dust controls included opacity limitations, mandatory performance standards and required buffer zones. Opacity limitations have not been specified for fugitive dust control because they have not been shown to correlate well with air quality impact from fugitive dust emissions. Mandatory performance standards may not be sufficient to achieve all ambient air quality standards. Buffer zones need not be required if mining operations are properly oriented and controlled. Therefore, the proposed rule gives the operator and ultimately the regulatory authority the flexibility to select from a mix of measures to achieve and maintain air quality standards.

Behind the proposed performance standard is the philosophy that operators should be provided with a wide variety of effective control techniques and should be given the option of selecting the ones that most closely coincide with their operations. Under this proposed regulation the regulatory authority reserves the right to review and supplement control techniques to assure that all Federal and State air quality standards are met. Fugitive dust from surface coal mining operations can be controlled by the mix of specified techniques to attain and maintain all applicable Federal and State air quality standards if this regulation is adopted.

Assessment of compliance should be based upon whether or not the operator is performing those easily observable actions that it has said in writing that it will do. If required ambient air quality monitoring demonstrates that additional control measures are necessary then it is expected that the operator or, if necessary, the regulatory authority, will immediately institute those measures. Surface coal mining operations are to be permitted only if public health and welfare are not jeopardized.

§ 816.97 Protection of fish and wildlife.

Proposed Section 816.97 deals with the potential negative impacts of surface mining activities on fish and wildlife and sets forth measures for prevention of those impacts, or mitigation or restoration of their habitats to ensure restoration, maintenance or enhancement of fish and wildlife resources.

The Section would place the responsibility on the person engaged in surface mining activities to apply the best technology currently available for compliance with relevant permit provisions, and divulgence to the regulatory authority of information pertaining to natural values of particular concern in the mine plan area. Those values of particular concern are the presence or habitat of threatened or endangered species listed by the State or Secretary, and bald and golden eagles and species otherwise protected by State or Federal law.

The authority for the proposed Section is found in the Act in Sections 102, 201, 501, 503, 504, and 515. Support for the requirements of the Section is found in the Endangered Species Act (16 U.S.C. 1531 *et seq.*), Conservation Programs on Public Lands (16 U.S.C. 670 g, h), the Bald Eagle Act (16 U.S.C. 668 *et seq.*), and the Migratory Bird Treaty Act (U.S.C. 703 *et seq.*).

The following literature was used in drafting this proposed Section:

1. "Environmental Criteria for Electric Transmission Systems (USDI, USDA, 1970).

2. "Powerline Contacts by Eagles and other Large Birds," REA Bulletin 60–10.

3. "An Environmental Guide to Western Surface Mining Part II: Impact, Migigation and Monitoring," FWS/OBS 78/05 Draft made for the U.S.F.W.S. Western Energy and Land Use Team (WELUT), Federal Building; Ft. Collins, Colo. 80521.

4. U.S. Department of the Interior, Fish and Wildlife Service, "Methods for the Assessment and Prediction of Mineral Mining Impacts on Aquatic Communities: A Review and Analysis" FWS/OBS–78/30 (1978) and other works cited therein.

OSM recognizes that the phrase "minimize disturbance and adverse impact . . . on fish and wildlife and related environmental values" is a subjective term, broad in application and open to interpretation. Therefore the public is invited to offer suggestion for applying specificity. As a point of departure we are proposing that it means.

(1) The operator must satisfy the regulatory authority that an adequate assessment has been made of the array of the major bird, reptile, amphibian and fish species in the area, as well as the significant components of the habitat. These components may include lesser forms of invertebrates, insects, arachnids, etc., if they are critical to the existence of a higher form in a given area;

(2) The operation should proceed swiftly and conclude in the shortest feasible time in order to shorten the period of adverse impacts; and

(3) The operator would be required to restore the habitat as near as possible to the premining condition so as to provide that after a reasonable period of time the restored habitat will support a comparable array and abundance of fish and wildlife species as before mining.

Consideration was given to a requirement that a person conducting mining activities, in addition to threatened or endangered species and eagles, also report migratory birds and animals not previously reported to the regulatory authority. Since there are so many migratory species, and since those of special significant would probably have already been identified in the wildlife plan, it was felt that this represented an unreasonable burden on the operator to go beyond the requirement as stipulated.

Since sedmentation is the most serious detriment to aquatic life and since road construction is one of the most serious contributors to sedimentation, access roads have been singled out for consideration in proposed subsection (d). While OSM is not suggesting that all roadways would be fenced, where roads and other artificial barriers may impede the migrations of such large game animals as elk and mule deer moving to or from winter range, special consideration would be given to measures that will facilitate uninterrupted passage.

Comment is solicited as to whether it would be advisable to clarify proposed paragraph (d)(3), or leave the specifics up to the regulatory authorities and the State or Federal program regulations. Not all wildlife can be effectively excluded from ponds unless unreasonable measures are applied; i.e., frogs, snakes and the like cannot be exclosed by fencing. The drafters have in mind open mesh fencing or other deflectors to exclude such animals as waterfowl or deer from water covered with oil, or other toxic materials

Consideration was given to a requirement for paving intermittent streams to secure the banks and retard erosion. This alternative was discarded as unreasonable.

Subsection (c) proposes to incorporate by reference two works on transmission lines. OSM solicits comment as to whether these works are appropriate for incorporation in these National permanent program regulations.

If not, the choice of appropriate guidelines for construction of power lines, as with other facilities, could in all cases be up to the regulatory authority.

§ 816.99 Slides and other damage.

This Section proposes requirements necessary to prevent damage caused by slides and erosion. It further specifies those steps that must be taken any time a slide occurs which may have a potential adverse affect on life, property, health, safety, or the environment in the permit area.

The authority for these provisions is found in the Act in Sections 102, 201, 501, 503, 504, and 515.

Literature used in the preparation of these sections includes:

1. Grim, E.C., and Hill, R.D. 1974, Environmental Protection in Surface Mining of Coal: U.S. Environmental Protection Agency Report EPA-670/2-74-093.

OSM solicits comments with respect to special regional, geologic, climatologic, or other objective circumstances which, if identified as being present in the permit area, should lead the regulatory authority to impose special conditions to prevent slides. The technical basis for any suggestions should be provided, if possible, together with proposed requirements on the operator.

§ 816.100 Contemporaneous reclamation.

This proposed Section sets forth a requirement applicable to all phases of reclamation activity.

Authority for this Section is found in the Act in Sections 102, 201, 501, 503, 504, 509, 510, and 515.

OSM considered an alternative approach of attempting to quantify contemporaneousness for all activities and enumerate maximum delay periods after which, if an activity had not been undertaken, this standard would be deemed breached. This alternative approach was rejected in favor of the proposed general language. The alternative selected should allow the regulatory authority needed flexibility to approve mine plans with varying timetables based on specific site conditions. OSM recognizes however, that absence of an objective time measure may make citizen complaints of unjustified delay less effective than perhaps they should be.

§ 816.101-816.105 Backfilling and grading.

Sections 816.101-816.105 are proposed regulations for backfilling and grading of areas disturbed by surface coal mining operations. Disturbed areas are to be reshaped to approximate original contour in a manner that minimizes erosion and water pollution and prevents slides. A level of production equal to that attained prior to mining and under proper management is to be achieved on the restored area.

Authority for these proposed Sections is found in the the Act in Sections 102, 201, 501, 503, 504, and 515.

Literature used in writing these proposed Sections includes the works cited in the foregoing sections of this Preamble relating to disposal of excess spoil (proposed Sections 816.71-816.73), topsoil (proposed Sections 816.21-816.25), hydrologic balance (proposed Sections 816.41-816.57) and the following:

House Committee on Interior and Insular Affairs House Report No. 99-45 (March 6, 1975), p. 151.

Senate Committee on Energy and Natural Resources Senate Report No. 95-128 (May 10, 1977), p. 83. State regulations from all States regulating surface mining.

The proposed contemporaneous backfilling and grading regulations are minimum standards based on State regulations thought to be reasonable and valid for contour mining, open pit mining, and area strip mining.

For contour mining, the operator would be required to rough backfill and grade the area within 60 days of disturbance. The time frame proposed is more stringent than the time frame set forth in the regulations of several States (i.e., Kansas, Montana, Ohio, Pennsylvania, and Tennessee) and less stringent than several others (i.e., Illinois, Kentucky, and Missouri). It is thought to a reasonable prescribed time limit for reshaping the area and minimizing environmental degradation.

The size of the ungraded area would be restricted by the 1,000 linear feet requirement. This proposed regulation is similar to that imposed by the Kentucky regulations and exceeds the distance requirements set forth in the Wyoming regulations. The standard is proposed to minimize water degradation and expedite rehabilitation of the disturbed area.

For open pit mining with thin overburden, OSM believes that the site specific needs of these operations necessitate that the regulatory authority approve a site-specific time frame for rough backfilling and grading that compliments the practical operation needs. The regulatory authority, when approving a time schedule, would be specifically mindful of the environmental significance of establishing time frames that would exceed the amount of time required for practical operation of the mining activities prior to backfilling and regrading.

For area strip mining, the operator would be expected to rough backfill and grade the strip mined area within 90 days of disturbance and at no time shall more than four spoil ridges exist.

The Act and the legislative history indicate that no highwalls are to be left after mining is completed. Highwall elimination is mandated in Section 515(b)(3) of the Act as is attainment of the "lowest practicable grade" in cases of inadequate overburden to fully grade to "approximate original contour" to "cover completely the highwall" as required in Section 515(d) of the Act for steep slope areas.

The proposed regulations also reflect the fact that premining slope measurements would be required to take into account natural variations in slopes. In many cases it would be appropriate for the permittee to develop accurate topographic maps for an area prior to any mining and to develop an overlay of the proposed postmining topography where that topography blends in with the surrounding terrain, reestablishes the surface drainage system, and serves the approved postmining land use. Then the final graded slopes would be specifically defined on the approved postmining topographic contour maps, where they may be reviewed as a whole.

The use of topographic maps, aerial photography and other photogrammetric methods of measuring premining and postmining slopes are appropriate only when topographic maps and photographically-produced maps are of sufficient accuracy to ensure adequate measurements. Thus, while maps and photographs might be used in addition to or in place of field measurements, the maps and photographs must be established as accurate by the permittee. Commonly used professional engineering practices are suitable for slope measurements and surveys could still be required by the regulatory authority.

The definition of approximate original contour of the Act supports the use of terraces so long as the terrace is not used as an inappropriate substitute for construction of lower grades. The need to restrict terraces to those situations where such level breaks in the terrain are truly necessary must be emphasized. Smaller diversion ditches are often more suitable than terraces. Further, the terraces discussed in the regulations are those to be left after mining and regrading are completed.

Terraces are often viewed as a means of access rather than for temporary control of erosion. It is the intent of this proposed Section to require that disturbed watersheds be reclaimed to conditions that approximate premining hydrologic conditions with minimal change in water flow and water quality. Such measures as the use of terraces would be permitted when approved by the regulatory authority. Hence, operators would be free to propose terraces as often or in any

manner that they see fit. The definition of approximate original contour in the Act looks to the drainage pattern of the area and the general surface configuration and indicates that the reclaimed area and any terraces used, must conform to these criteria. Proposed terraces should have a well-defined role in supporting the approved postmining land use.

Although the practice of constructing diversion ditches in the form of small terraces on moderate slopes it is not uncommon, it would not be appropriate to leave wide terraces on any slopes unless the access afforded by such terraces is supportive of the approved postmining land use.

The purpose of the proposed dimensional limits on terraces was to create a reasonably accessible land form that supported postmining land uses and to provide erosion stability. Terraces are often used on valley fills and head-of-hollow fills to break up otherwise uninterrupted slopes. Nonetheless, terraces, and other types of fills addressed in this Section, would be reviewed for suitability by the regulatory authority and must be constructed in a manner compatible with the postmining land use.

The static safety factor of 1.3 is an appropriate measure of mass stability that has been accepted by the Corps of Engineers, MSHA, and other agencies. Greater slopes may be used if the safety factor is achieved and erosional stability is assured. Regulatory authorities may specify higher safety factors when necessary, and permittees will be responsible for design and construction that provides more stability. The proposed absolute limit on terrace faces (the outslope of the terrace bench) allows the alternative use of a stability calculation. However, since stability factors can change according to the method of calculation, all calculations would be based on commonly accepted professional engineering practices. If it becomes necessary to specify methods, the Office would do so under these regulations. Width limitations would be established so that terraces would not serve as access roads unless special consideration is given to retention or construction of roads to support the postmining land use and the roads would be in the approved postmining land use plan.

The definition of approximate original contour in the Act supports the concept of not restricting terraces to steep slopes so long as the terrace would not be used as an inappropriate substitute for construction of lower grades. The need to restrict terraces to those situations where such level breaks in the terrain are truly necessary must be emphasized. Smaller diversion ditches are often more suitable than terraces to achieve these purposes. Further, the terraces discussed in the proposed regulations are those to be left after mining and regrading are completed. During operation of the mine steeper outslopes and wider benches could be temporarily constructed if they are safe and in compliance with the Act and proposed regulations. Cut-and-fill terraces would be permissable when compatible with the approved postmining land use.

The natural angle of repose of certain types of natural materials may be too steep to control erosion and increases in total suspended solids; thus, the postmining slopes are likely to be reduced below the angle of repose in most situations.

The proposed regulations would require that the reclaimed areas must be graded to slopes equal to or less than "approximate premining slopes," which would be those slopes determined by the regulatory authority to be stable slopes that provide a land surface capable of supporting the approved postmining land use. The term "approximate premining slopes" is meant to indicate that such slopes must be selected according to the following criteria:

(1) They would not appreciably exceed the maximum slopes measured for the premining surface.

(2) They could be less steep than the natural slopes by that amount necessary to prevent slides, erosion and water pollution, to provide adequate drainage, to cover all acid forming and other toxic materials, and to permit revegetation, and

The "final graded slope," measured after mining and grading, would not necessarily be a uniform slope but is often an overall average slope. Therefore, terraces, roads, and diversion ditches could be included within the slope measurement path provided the overall final graded slope met the criteria set out above. Long, uniform, uninterrupted slopes are not generally desirable since they tend to erode more readily than do rolling, nonuniform slopes.

In order to promote the reclamation of mined areas inadequately reclaimed because much of the previous spoil and waste from the previous mining operation was deposited on the downslope, leaving insufficient material for grading to approximate original contour, the proposed regulations have been developed to reflect reality. These proposed regulations are intended to encourage the reclaiming of poorly reclaimed areas while ensuring an improvement in land quality and perhaps water quality, over and above that left by the previous mining. One of the purposes of the Act is to promote the reclamation of mined areas left without adequate reclamation. Some previously mined areas lack sufficient available spoil or topsoil to achieve postmining conditions which meet all the land configuration and revegetative requirements. Such operations would be required to retain all overburden and spoil material on the bench and to grade completely to eliminate the highwall and maintain a stable slope. The entire mining area would be stabilized and revegetated.

Review of State requirements indicates that 4 feet is usually considered adequate to cover toxic-forming or acid-forming materials. There is limited research which shows 4 feet to be inadequate to prevent upward migration of salts in the semi-arid to arid climates or to protect deep rooting plants which are part of the revegetation plan. The proposed regulation in Section 816.103 specifies 4 feet. A qualifying phrase has been placed in the proposed regulation to address thicker amounts where necessary to guard against salt migration and against exposure by erosion and to provide an adequate plant growth substrata.

The proposed requirements to analyze, and treat or bury coal processing wastes or coal conversion facility waste is believed to be appropriate to the problem. It is necessary to ensure that waste disposal in mine areas are handled in a manner that does not adversely affect the hydrologic balance, especially as the balance relates to water quality.

Before waste materials from a coal processing or conversion facility outside the permit area or from other offsite activities such as municipal wastes, are used for fill material, it would need to be demonstrated to the regulatory authority by hydrological means and chemical and physical analyses that use of these materials will not adversely affect water quality, water flow, and vegetation; would not present hazards to public health and safety; and would not cause instability in the backfilled area. Public comment is solicited as to whether these Sections should include more specific regulation, or prohibitions, against dumping of offsite solid waste. See Preamble discussion of 816.89, Noncoal wastes.

The intent of proposed subsection 816.103(b) is to provide the regulatory authority with a basis for establishing site-specific requirements that would assure stability of backfilled material, selective placement and stability of backfilled material, and selective placement and compaction of backfill material when necessary to prevent erosion and leaching of toxic substances into surface and subsurface water.

§ 816.106 Regarding or stabilizing rills or gullies

This proposed regulation is intended to minimize soil loss and reduce sedimentation by requiring stabilization of rills and gullies that are more than 9 inches deep.

Authority for this proposed Section is found in Sections 102, 201, 501, 503, 504, 507, 508, and 515 of the Act.

The literature used in preparing this Section includes: *Soil Survey Manual:* Agriculture Handbook No. 18, U.S. Department of Agriculture, S.C.S., 1951, pp 503.

Rills and gullies concentrate the runoff water into tiny rivulets and small channels and accelerate erosion. To distinguish between a natural rill or shallow channel through which overland flow is conducted, a maximum acceptable depth of 9 inches is established so as to preclude the formation of large gullies that severely degrade the area. However, the regulatory authority may reduce the size criteria where shallower gullies are disruptive to the post-mining land use or if they cause excessive erosion or sedimentation.

The intent of this proposed provision is to allow stabilization through means other than regarding if such methods produce equal or better results. Thus, the use of straw or the use of small equipment to fill and regrade in a manner that disturbs little additional area may be permissible. Rills and gullies formed along disturbed and reclaimed drainageways would be permitted if adequate stabilizing vegetation has been established.

The soil losses and destruction resulting from rill and gully erosion are illustrated in Figure 48, Soil Survey Manual, page 263.

As an alternative to the 9-inch requirement of this proposed Section, 6-inch and 12-inch depths were considered as well as deletion of the requirement entirely. The 6-inch depth would make it difficult, in some locations, to distinguish between those erosional features requiring repair and features that approximate natural drainage channels in highland (divide) areas. To delete the requirement entirely or increase the depth to 12 inches would in all probability result in excessive loss of plant growth media by erosion. The 9-inch depth is selected because it is the maximum depth that can be stabilized by most grasses, since a large portion of their roots occur in this surface layer (p. 250, Soil Survey Manual).

Comment is solicited on the stabilization of rills and gullies after topsoil has been replaced. Specifically, the Office would like comments to suggest at what point, if any, in the revegetation process a 9-inch rill or gully should no longer be considered to present a sufficient risk of erosion to require elimination, in light of the damage likely to be done by required earthmoving equipment, if any.

§§ 816.111–816.117 Revegetation.

These proposed Sections are intended to prevent land disturbance during mining operations which can result in landslides and cause erosion and water pollution, which deteriorate the environment, and which can be detrimental to the health and well-being of the occupants of the affected area. These proposed revegetation regulations are intended to minimize erosion, reduce toxic runoff, restore the land to its premining productivity or potential, and establish a vegetative cover on disturbed areas.

Authority for these proposed sections is found in 102, 201, 501, 503, 504, 507, 508, 515 and 519 of the Act.

The literature used in preparing the regulations is as follows:

1. Aldon, E.F., "Techniques for establishing native plants on coal mine spoils in New Mexico," in Third Symposium on Surface Mining and Reclamation, Volume I (1975) pp. 21, 26.

2. Aldon, Earl F., "Reclamation of Coal-mined land in the Southwest," Journal of Soil and Water Cons., Vol. 33, No. 2, 1978, pp. 75-79.

3. Aldon, Earl F. and H.W. Springfield, "Reclaiming Coal Mine Spoils in the Four Corners," Reclamation and Use of Disturbed Land in the Southwest, University of Arizona Press, 1977, p. 234.

4. Armiger, W.H. et al, "Revegetation of land disturbed by strip mining of coal in Appalachia," Department of Agriculture, Agricultural Research Service, (1976), p. 8.

5. Environmental Protection Agency, "Processes, procedures, and methods to control pollution from mining activities," (1973) EPA 430/9-73-011, p. 151.

6. Environmental Protection Agency, "Erosion and sediment control: surface mining in the eastern United States," (1976) pp. 81-87.

7. Grandt, Alton F., "Mined-land Reclamation in the Interior Coal Province," Journal of Soil and Water Conservation, Volume 33, No. 2, pp. 62-68.

8. Grim, E.C., and Hill, R.D., "Environmental protection in surface mining of coal," Environmental Protection Agency, 1974, pp. 189-190.

9. "Guidelines for Reclamation of Surface Mined Areas in Utah" U.S. Dept. of Agriculture, S.C.S., Nov. 1972, p. 6.

10. Handbook for Making Resource Inventories, "Methods of Applying Land and Grass Management Principles" USDI, BIA, Chap. III, p. 14, 1961.

11. Heady, Harold F., "Rangeland Management" McGraw-Hill, 1975, p. 350-351.

12. Holton, H.N., 1972, "A concept for disfiltration estimates in watershed engineering" USDA; ARS 41-51, Figures 6, 7, and 8, p. 23, 24 and 25.

12a. House Report No. 95-218, 95th Congress, 1st Session (1977) p. 93.

13. Indiana, General Procedures Respecting the Administration of Chapter

344 Acts of 1967, Effective Jan. 1, 1968, pp. 1-6.

13a. Iowa, State of, "Recommendations for Establishment of Vegetation on Surface Mined Areas" Item 10, Time of Seeding, Land Rehabilitation Advisory Board.

14. "Kentucky Guidelines for Classification, Use and Vegative Treatment of Surface Mine Spoil" U.S. Dept. of Agri., S.C.S., Lexington, Ky., 1973, p. 12.

15. Kranz, B. W., "Benefits in cost and effectiveness of liquid materials use in hydroseeding operations," in Second Research and Applied Technology Symposium on Mined Land Reclamation (1974) p. 163.

16. Merkel, D. L., "Revegetation in the Southwest—its hazards and successes," Department of Agriculture, Soil Conservation Service, 1974, pp. 189-190.

17. Montana Administrative Code, Adopted Rules and Regulations, Pursuant to Title 50, Chap. 10, R.C.M., 1947, pp. 26-48.21 to 26-48.38.

18. "Critical Area Stabilization in New Mexico," New Mexico Inter Agency Range Committee Report for the Critical Area Stabilization Workshop, January 1973, p. 11.

18a. New York, Mined Land Reclamation Mine Operator Handbook, P. III 1-43.

19. Ohio Revised Code, Chapter 1513, Strip Mining and Reclamation of Mined Land, Sec. 1513.16, p. 24.

20. Packer, P. E. and Christensen, G. F., Department of Agriculture Forest Service "Guides for controlling sediment from secondary logging roads" (undated) p. 28.

21. "A Guide for Revegetating Bituminous Strip Mine Spoil in Pennsylvania" Research Committee on Coal Mine Spoil Revegetation in Pennsylvania, p. 21, and Appendices I, II, III and IV.

22. Plass, William T., "Reclamation of Coal-mined Land in Appalachia, Jour. of Soil & Water Cons.," Vol. 33, No. 2, 1978, pp. 56-61.

23. Power, J. F., R. E. Rices, and F.M. Sandoval, "Reclamation of coal-mined land in the Northern Great Plains" Jour. of Soil and Water Cons., Vol. 33, No. 2, 1978, pp. 69-74.

24. Sampson, Arthur W., "Range Management, Principles and Practices" John Wiley & Sons, Inc., 1952, pp. 226, 229 and 232.

25. Stoddart, Laurence A., Arthur D. Smith, and Ihadis W. Box, "Range

Management" Third Edition, 1943, 1955 (1975) McGraw-Hill, p. 483.

26. Vallentine, John F., "Range Development and Improvements" Brigham-Young Univ. Press, Provo, Utah, 1971, p. 279.

27. Vogel, Willis G., "The effect of herbaceous vegetation on survival and growth of trees planted on coal-mined spoils" In Proc. Res. & Appl. Technical Symposium on Mined Land Reclamation, March 1978, Pittsburgh, Pa., pp. 197-207. Bituminous Coal Research, Inc., Monroeville, Pa. 1973. Table 1.

28. Vogel, W. G., "All seasons seeding of herbaceous vegetation for cover on Appalachian Strip Mine Spoils." In II Proc. Research and Appl. Technology Symposium on Mined Land Reclamation, Louisville, Kentucky, pp. 175-178. Bituminous Coal Research, Inc., Monroeville, Pa., October 1974, Tables 1, 3, 4, 5.

29. Vogel, W. G., "Requirements and use of fertilizer, lime, and mulch for vegetating acid mine spoils" United States Department of Agriculture, Forest Service Report ARC-71-66-T4, 1974, pp. 260-281.

30. Vogel, W. G., "Use and requirements of lime, fertilizer, and mulch in acid strip mine spoils." In III Proc. Research and Appl. Technology Symposium on Mined Land Reclamation, Louisville, Kentucky, Bituminous Coal Research, Inc., Monroeville, Pa., October 1975, Tables 1, 2, 7.

31. Vogel, Willis G., and Berg, William A., "Fertilizer and herbaceous cover influence establishment of direct-seeded black locust in coal mine spoils" In R.S. Hutnik and Grant Davis (ed.). "Ecology and Reclamation of Devastated Land" Volume 2. Gordon & Breach, NY, pp. 189-198, 1973. Table 1.

32. Wahlquist, B. T., et al., "Mined-land revegetation without supplemental irrigation in the arid Southwest" pp. 29, 31, 32;

33. Woodward, Lowell, W., 1943. "Infiltration capacities of some plant soil complexes of Utah Range Watershed Lands." American Geophysical Union Transactions, pt. II, p. 468-473.

34. Z'Berg-Nejedly Forest Practice Act of 1973 (California Forest Practice Act), Div. 4, Chap. 8, Pub. Res. Code, Article 2. pp. 1-18.

Proposed Section 816.111 would require that the operator, in accordance with the revegetation plan discussed in proposed Subsection 780.19(d), promptly seed or plant all disturbed areas except water areas, road surfaces, and intensive agriculture areas, and achieve a vegetative cover that stabilizes the area from erosion and is similar to the native species of the disturbed area.

One of the principal effects of vegetation is to stabilize the soil surface with respect to erosion. This regulation would require stabilization of the soil with respect to erosion, not prevention of erosion where it would otherwise be a natural process.

The permittee would be required to use technical publications or the results of laboratory and field tests that are approved by the regulatory authority to determine the varieties, species, seeding rates, seeding dates, and planting plans and soil amendment practices essential for establishment and self-regeneration of vegetation.

Under proposed Section 816.112 the requirement for appropriate field trials should be interpreted broadly to include successful experience with species in the area mined or a similar area. Naturalized species that have been in common usage, such as the tree species in the Great Plains, will generally have been demonstrated to be acceptable. However, the operator and the regulatory authority must be mindful of the geographic adaptation of each species since species become established only under conditions similar to those under which it evolved (Sampson, p. 226) and of the many plant species, both introduced and native, which have been used to improve and stabilize the soil (Sampson, p. 229).

In order to avoid the spreading and subsequent propagation of undesirable, noxious and toxic, species the seed or seedlings used in revegetating disturbed areas would be required to meet Federal and applicable State requirements for purity.

These proposed regulations are adapted to meet the need for rapidly establishing vegetative growth and substituting introduced species for native species. Many introduced species, annual and biannual, become established more quickly and provide more abundant growth than perennials and may in some instances be used to advantage in controlling erosion while permanent perennial species become established. Establishment of native species normally occurs over too long a period of time, often requiring 1 to 3 years for establishment, to effectively protect the soil and hydrology (Sampson, Arthur W., 1952, p. 232; Vallentine, John F., 1971, p. 279, and Heady, Harold F., 1975, p. 350-351.) Introduced species, especially annuals, can be used as a "nurse crop" to ameliorate severe conditions such as intense isolation, high surface temperature, and rapid evaporation that make establishment of permanent vegetation difficult on many sites (Plass, 1978). The advantage of using introduced species when reclaiming mined lands is supported by Aldon, p. 76; Grandt, Aldon, p. 64; Plass, p. 58-59; and Power, p. 70.

The requirements of proposed Section 816.113 are intended to assure that there will be no major time lag between completion of regrading and revegetation to the area to be seeded. As stated by Sampson, p. 245, the time of seeding depends upon the method of land preparation and the forage species used. Some severe sites may require the use of annuals such as small grains, grasses or legumes to stabilize the area while perennials become established (Plass, William T., 1978, p. 58). In many locations, suitable species are available and climatic conditions are favorable for establishing seedling, that provide ground cover for erosion control, for a major portion of the year.

This segment of the proposed regulation is required in several state reclamation regulations. (Indiana, p. 5; Montana, p. 47; New York, p. III-37; and Ohio, p. 24). Also, seeding time benefits are recognized in the following State guidelines: Iowa, Item 10; Kentucky, p. 12; New Mexico, p. 11; Pennsylvania p. 21 and appendices I, II, III and IV; and Utah, p. 6.

Under proposed Section 816.114, the mulch requirement is flexible and its necessity, type, benefits, and uses in revegetating a disturbed area would be at the discretion of the regulatory authority. In addition to the use of vegetation residue such as bark, straw, hay and wood fibers the regulatory authority could determine that establishment of annual species provides an in-situ mulch that will protect the site and aid in the establishment of permanent perennial species. Plass, 1978, states that the use of annuals can be beneficial in establishing perennial species. The moisture saving, soil stabilizing and, consequently, seeding establishment benefits of mulching are documented by Vogel, 1974.

Literature recognizing the benefits of mulch are: Grim and Hill, 1974, pp. 189-190; Environmental Protection Agency, 1976, pp. 81-87; Armiger, 1976, p. 8; Aldon, 1975, pp. 21, 26; Wahlquist, undated, pp. 19, 31, 32; Kranz, 1974, p. 163; Merkel, 1974, pp. 189, 190; Packer and Christensen, undated, p. 28; and EPA, 1973, p. 151.

As an alternative to this proposed Section, fixed minimum amounts, as specified by regulation, of mulch were considered but determined inappropriate in view of the varied site needs, and benefits derived from the use of mulch when revegetating and establishing permanent vegetation on a disturbed area. This determination was based in part on the varied mulching requirements of States. Those mulching requirements range from use at the discretion of the State agency to mandatory use on all disturbed lands. *See* Colorado: Proposed Rules and Regulations of the Land Reclamation

Board, Section (V)(D)(5) and (7); Montana: Department of State Lands, Reclamation Division Regulations, Section 26-2.10(10)-S10350; Ohio: Department of Natural Resources, Division of Reclamation Strip Mining Regulations, Section 1501; 13-15-02: Tennessee; Department of Conservation, Division of Surface Mining Regulations, Section 0400-3-7-.04; West Virginia: Department of Natural Resources Surface Mining Reclamation Regulations, Chapter 20-6, Section 9D; Wyoming: Department of Environmental Quality, Land Quality Rules and Regulations, Chapter II, Section 5.

Proposed Section 816.115 relates to grazing on recently vegetated areas. The purpose of this proposed Section is to incorporate practical livestock control essential to establishment and growth of new seedlings. The need is supported by the work of Aldon and Springfield; Grandt, p. 65; Sampson, p. 232; Vallentine, p. 279; Heady, pp. 350-351; and Stoddart et al., p. 483 and USDI, Bureau of Indian Affairs, Chap. III, p. 14.

Proposed Section 816.116 would be a highly localized and site-specific proposal taking into account geography, climate, soil, and hydrology of the particular area where the mine is located. This Section is structured to—

(1) Incorporate site-specific variations within the permit area;

(2) Evaluate a permanent vegetative cover capable of regeneration and plant success;

(3) Consider site conditions of previously mined areas;

(4) Insure a ground cover for controlling erosion; and

(5) Utilize reference areas.

This regulation is proposed to allow for the flexibility required, as a result of the diverse climatic and soil conditions, to properly measure the different vegetative types that are found in the mining areas.

Reference areas are to be used to obtain a description of the premined vegetative resource both within the permit area and in similar areas adjacent to the area that will be disturbed. The reference areas must be similar to and representative of the geology, soils, slope, and vegetation in the permit area. The areas would be used to measure ground cover, productivity and species diversity that are produced naturally. Any one of a number of vegetation measuring techniques may be authorized by the regulatory authority. When permit areas contain more than one site, as determined by the above factors, it may be necessary to use additional reference areas to assure that vegetative and soil data will be representative of and similar to the area to be restored. The measurements taken from the reference areas will be used to estimate normal vegetation, productivity, plant cover, plant succession and plant self-generation and these measurements would be used, by the regulatory authority, to determine when the disturbed area has been adequately revegetated.

In response to public comment on earlier alternative drafts, the current language emphasizes that species diversity, distribution, seasonal variety, and vigor be evaluated.

These proposed regulations should not be construed as attempting to absolutely prevent soil erosion. Such a goal would be difficult to achieve. They would require that revegetation control erosion which would not otherwise be natural for a properly managed area.

Under these proposed regulations the success of the revegetation pursuant to this scheme would be measured on the basis of reference areas as proposed and approved under proposed Subsection 780.19(2)(d). Thus, if the reference area for a particular mine in the West was properly managed and yet was characterized by sparse vegetation and natural erosion, that is the condition to which the mined area must be reclaimed. If the mined area had been improperly managed, i.e., overgrazed prior to the mining, the operator may not return the area to its mismanaged conditions which would be characterized by sparse ground cover and greater erosion. Rather, the operator must reclaim such an area in reference to a properly managed area approved by the regulatory authority which may require a vegetation cover with less exposure of bare soil and greater capacity to retard erosion than that which the area had prior to mining. This requirement would not mean that land which has irreversibly lost its productivity capacity must be revegetated with reference to a properly managed area, but the irreversibility of damage caused by overgrazing or soil erosion is a determination that would be made by the regulatory authority.

The Act's legislative history makes clear that Congress did not intend for the postmining use of land which had been improperly managed to be limited to its most recent premining use. The legislative history of Section 508(a) of the Act, which sets forth the requirements for a reclamation plan, contains the following explanation regarding the contents of a plan (S. Report No. 95-128, 95th Cong., 1st Session (1977) pp. 76-77):

"The description of the land which will be affected by the proposed mining operation must also include an evaluation of the capability of the site to support a variety of uses prior to any mining disturbance. This description should give consideration to soil and foundation characteristics, topography, and vegetative cover.

"The description is to serve as a benchmark against which the adequacy of reclamation and the degradation resulting from the proposed mining must be measured. It is important that the potential utility which the land had for a variety of uses be the benchmark rather than any single, possibly low value, use which by circumstances may have existed at the time the mining began."

Thus, the Senate Report indicates that Congress intended the postmining use of land to be based on its "potential utility" for a number of uses before mining, not some low use that may have resulted from mismanagement.

The benefits of a 90 percent reclamation of the ground cover of the reference area are well supported by the concept illustrated by Woodward, pp. 468-473, and Holton, Figures 6, 7, and 8, pp. 23-25. The 90 percent statistical confidence level, reduced to 80 percent for shrublands, is based on handbooks in the Directive System of the U.S. Department of Agriculture, Forest Service.

In response to public comments related to the problems associated with the use of reference areas by the small operator, it was considered by the Office that certain small operators might, upon approval of the regulatory authority, be exempt from the use of reference areas when measuring success of revegetation of the disturbed area. To be eligible the small operator would have had to have had a permit for 40 acres or less in an area that receives 26 or more inches of precipitation annually. The final determination of the method to be used when measuring the success of revegetation would have rested under this proposal with the regulatory authority. The regulatory authority might require a more stringent standard than set forth in proposed Subsection 816.116(c) when deemed necessary to prevent pollution, protect quality of the environment and health, safety and general welfare of the public. This alternative was not adopted by OSM, since it was considered that the reference area requirement is not excessive and leads to achievement of important environmental goals.

The proposed Section 816.117 is based on the California Forest Practices Act and similar Acts in Washington and Oregon.

§§ 816.131-816.132 Cessation of operations

These proposed Sections would require persons conducting surface mining who cease operations on either a temporary or permanent basis to eliminate safety hazards and assure

environmental protection, including erosion control and visual degradation.

Authority for these Sections is found in the Act in Sections 102, 201, 501, 503, 504, 509, 510 and 515.

Under the proposed Sections the operator would be required to advise the regulatory authority of his intentions to cease operations. The Office proposes that the operator include in his cessation plans the total acres within the permit area, reclamation completed, and the revegetation to be completed. The operator would be required to eliminate or remove all safety hazards and structures and equipment not involved in the postmining land use.

§ 816.133 Postmining land use

Section 816.133 if adopted would set out minimum requirements for establishment of postmining land use for the permit area. The goal of Section 816.133 is to ensure—

(a) Compatability with adjacent land use and/or local planning and zoning;

(b) Feasibility of postmining land use as related to local and regional needs;

(c) Adequate planning of public facilities;

(d) Financial feasibility of the postmining land use;

(e) The development of a postmining land-use plan that conforms to accepted planning standards, the premining land capability, and that reflects information contained in the resource inventory; and

(f) That postmining land use does not present hazards to public health and safety.

The following Sections of the Act authorize proposed Section 816.133: 102, 201, 501, 503, 504, 508, 515.

The following technical literature was considered in developing this section:

1. Cleckner, E. K. Highest Land Use as a Planning Tool. Appraisal Journal, 215-223, 1969.

2. Rowlson, J. F. Zoning vs Alternative Value. Appraisal Journal, 513-517, 1963.

3. U.S. Dept. of Commerce. Zoning for Small towns and Rural Counties. U.S. Government Printing Office, Washington, D.C. 1970.

4. Barlowe, R. Land Resource Economics: The Political Economy of Rural and Urban Land Resource Use. Prentice-Hall, Inc. Englewood Cliffs, N.J. 1958.

5. Steinbach, S. E. Aesthetic Zoning: Property Values and the Judicial Decision Process. Missouri Law Review, 35, 176-186. 1970.

6. Frye, J. C. Geological Information for Managing the Environment. Illinois Geological survey, Environmental Geology Notes 18, 1967.

7. Yelverton, C. A. The Role of Local Governments in Urban Geology. In Environmental Planning and Geology in the Urban Environment, ed. by Donald R. Nichols and Catherine C. Campbell. U.S. Government Printing Office, Washington, D.C. 1971.

8. Kusler, J. A. Open Space Zoning: Valid Regulation or Invalid Taking. Minnesota Law Review, 57:1, November 1972.

9. Heyman, I. M. Innovative Land Regulation and Comprehensive Planning. Santa Clara Lawyer 13, 1972.

10. Tourbier, J. and Westmacott, R. Water Resources Protection Measures in Land Development: A Handbook. Water Resources Center, University of Delaware, Newark, Delaware. 1974.

11. Leopold, L. B. Hydrology for Urban Land Planning: A Guidebook on the Hydrologic Effects of Urban Land Use. USGS Circular 554. U.S. Government Printing Office, Washington, D.C. 1968.

12. Detwyler, T. R. and Marcus, M. G. Urbanization and the Environment. Duxbury Press. Belmont, Cal. 1972.

13. Livingston and Blayney, Inc. Public Costs are Expensive in Hillside areas. Foothills Environmental Design Study, Report No. 3 to the City of Palo Alto, Calif. Palo Alto Planning Department. Palo Alto, Calif. 1970.

14. Flawn, P. T. Environmental Geology: Conservation, Land-Use Planning, and Resource Management. Harper and Row. New York, NY 1970.

15. Coughlin, R. E. and Hammer, T. R. Stream Quality Preservation Through Planned Urban Development. U.S. Government Printing Office, Washington, D.C. 1973.

16. McComas, M. R., Hinkley, K. C. and Kempton, J. P. Coordinated Mapping of Geology and Soils for Land Use Planning. Illinois Geological Survey. Environmental Geology Notes 29. 1969.

17. Moore, G. T. Emerging Methods in Environmental Design and Planning. M.I.T. Press. Cambridge, Mass. 1968.

18. Johnson, A. H., Berger, J., and McHarg, I. L. Landscape Analysis for Ecologically Sound Land Use Planning. Department of Landscape Architecture and Regional Planning. University of Penna., Phila. PA 1978.

19. Thurow, C., Toner, W. and Erley, D. Performance Controls for Sensitive Lands. American Society of Planning Officials Planning Advisory Service. Report Nos. 307, 308. Am. Soc. of Planning Officials, Chicago, Ill. 1975.

20. Toth, R. Criteria in Land Planning and Design. Landscape Architecture 62(1), 1971.

21. Bartelli, L. J., Klingebiel, A. D., Baird, J. V. Heddleson, M.R. Soil Surveys and Land Use Planning. Soil Science Society of America and American Society of Agronomy, Madison, Wis. 1966.

22. McHarg, I. L. Design with Nature, Natural History Press. Garden City, New York. 1969.

23. Spicer, R. B. Increasing State and Regional Power in the Development Process. ASPO Planning Advisory Service Report No. 255. American Society of Planning Officials, Chicago, Ill. 1970.

In order to minimize the adverse economic and environmental impacts on adjacent lands or the community, postmining land uses should be compatible with adjacent land. Compatability is and has been traditionally determined through planning, zoning and subdivision ordinances at the local and State level. Alternatively these proposed regulations could include no requirements for compatible land use, leaving that function entirely to existing State or local government controls or to market pressures.

Incorporating development of postmining land uses compatable with adjacent land uses through State and local planning institutions has the advantage of providing flexibility to account for local variation in environmental, economic and social conditions and needs. The proposed rule, by requiring the written statement of the authority responsible for land-use planning increases the likelihood of compliance with the governmental aspects of land-use determination. The compatibility requirement is non-specific as this is deemed to be a prerogative of the responsible land-use planning authority. Specific requirements for adjoining or adjacent land use could also have been written into these proposed regulations, but this alternative was rejected as too much of an interference with State and local governments.

Postmining land use plans must be financially feasible and related to local or regional economic needs. Without such attributes there is no assurance of the long term viability of the postmining land use. If there is clearly no trend or market need for a particular land use in the local or regional area, a proposal for that use would not be reflecting local or regional needs. Alternatives considered for establishing the need for a particular land use range from consideration of all Federal, State and local needs through completely ignoring the local or regional economic conditions.

Requiring that the proposed postmining land use reflect the local and regional needs will assist in assuring—

(a) Long term economic stability for the postmining land use; and

(b) That the postmining land use will add to the economic vitality of the existing local community.

Postmining land use plans must contain the provision for any public service needed for the proposed postmining land use. For example, where the proposed postmining land use will require additional public services the plan should explain who will be responsible for providing these services. Letters of commitment from local or State parties responsible for planning and maintaining these services will help assure that communities realize the financial implications of these commitments. A schedule of plan implementation is required so that timely development of the proposed land use is assured. Alternatives considered were placing complete responsibility for additional services on the permittee, and elimination of any requirement of determining or identifying additional public services required to assure achievement of the postmining land use. These alternatives were rejected as inconsistent with accepted landuse planning practices.

The provision of requiring letters of commitment from the parties responsible for public services helps assure——

(a) That consideration has been given to public service requirements during development of plans;

(b) There is local understanding of future public service needs of the proposed postmining land use; and

(c) That specific service requirements of the postmining land use can be met within the proposed schedule.

No requirement for financial plans might result in an unsupportable land use. Additional specific detailed requirements and contractual commitments could have been required by the proposed regulations but this might have unduly restricted land use planning with no corresponding environmental or other benefits. Requiring a financial plan for postmining land use has the advantage of——

(a) Helping assure economic soundness of the proposed postmining land use; and

(b) Providing valuable planning information to local and State governments responsible for overall planning and integration of postmining land uses with present and future land uses of the community.

The postmining land use plan must be the result of analysis synthesis and of economic, social and environmental information. The inventory and land use capability synthesis must support the specific proposed postmining land use.

Utilizing professional expertise in plan preparation will help operators speed up the approval process and reduce overall cost because professional planners are familar with the local planning processes.

By identifying the responsibility for hazard and pollution control early in the planning process, the professional engineer, landscape architect or land use planner can effectively design the lowest possible cost solutions to these technical and site specific problems.

Completion of reclamation activities in a timely manner will minimize the adverse environmental effects of mining and will reduce offsite damage as well as damage that may result from natural environmental conditions that occur in the interim between mining and complete reclamation.

Through early review of the plan by State and Federal fish and wildlife agencies and the specific requirement for addressing fish and wildlife concerns in the postmining land use plan, the objectives of preventing impacts to fish and wildlife while minimizing cost and delay to the operator, are achieved. The alternative of no coordination of activities with State agencies would be contrary to policies established by the Act. By specifically addressing this requirement in the planning stage, it will be possible to expedite the review process and ensure effective consideration for fish and wildlife resources.

The plan proposing new postmining land uses that will require continuous or long term maintenance would have to contain written commitments of the mine operator or land owner to provide the maintenance specified in the plan that will be applicable after the release of performance bonds under the proposed rules. The plan would show evidence that the site conditions are capable of supporting the long term use proposed with the management specified. This part of the proposed rules is basically a restatement of the reclamation plan requirements at the performance standards level. Through specification for maintenance in the plan accompanied by the written commitment, the mine operators and/or land owner will have carefully evaluated the feasibility of the proposed postmining land use. This will assure——

(a) Adjoining landowners and local communities that the land is capable of supporting the postmining land use; and

(b) Feasibility of continued maintenance of the postmining land use.

Public comment is solicited with respect to the appropriate manner for determining "higher or better" uses, as set forth in Section 515(b)(2) of the Act and proposed paragraph 816.133(b)(2) of these regulations. While criteria for alternative uses are proposed in Subsection 816.133(c), the Office is interested to know what the public believes would be an appropriate role for the Office in defining the hierarchy of land uses which will ensure that "higher or better" land uses do, in fact, result when operators propose not to restore land to its premining capability.

PART 817—PERMANENT PROGRAM PERFORMANCE STANDARDS—UNDERGROUND MINING

§ 817.1 Scope and objectives

Part 817 proposes the minimum performance standards which would be applicable under a State or Federal program for underground coal mining activities. The organization of this Part parallels that of Part 816, the standards for surface mining, although some modifications were needed to reflect the distinct difference between surface and underground coal mining, including entirely new sections for subsidence (proposed Sections 817.121–817.126).

An alternative drafting organization would have been to propose all the regulations that apply to both surface and underground coal mining in a single Part, regulations applying only to surface mining in a second part, and regulations applying only to underground coal mining in a third part. This alternative was rejected even though it would have resulted in a shorter set of regulations because the office believes that the users of these regulations would rather find everything that applies to them in a single place. Comment is requested on the proposed organization and the alternative.

§ 817.11 Signs and markers

This proposed Section is substantially identical to the corresponding Section of Part 816. The reader is referred to the appropriate portions of this Preamble which discuss Part 816 for information concerning the technical basis, alternatives considered and statutory authority for this Section. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While the Office considers the appropriate signs and markers requirements to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be further reflected in the regulations. The reader's attention is directed to proposed Subsection 817.11(c)(1), where the language varies somewhat from the parallel requirement in proposed Section 816.11. In addition, it should be noted that one commenter to the prepublication draft of this Section, suggested that the requirement for blasting signs in Subsec-

tion 817.11(f)(1) be limited to areas where surface blasting will occur. Further public comment is solicited as to the need for signs in areas where underground blasting will occur. The office at this time is inclined to modify this Section in accordance with the commenter's proposal.

§ 817.13–817.15 Casing and sealing of drilled holes

These proposed Sections are intended to ensure that boreholes, shafts, wells, and other accesses to underground mines are sealed, filled, cased, lined, or protected so as to ensure and protect: the health, safety, and general welfare of the public, the quality of the environment, and potential land uses.

Authority for these proposed Sections is found in Sections 102, 201, 501, 503, 504, 507, 508, 516, 517, 701, and 717 of the Act.

Following is a list of the technical literature that supports these performance standards:

1. Ciolkosz, E. J. and L. T. Kardos, *Soil as a Medium for the Renovation of Acid Mine Drainage*, Office of Water Resources Research, December 1973.

2. Doyle, William S., *Mine Sealing, Deep Coal Mining Waste Disposal Technology*, Noyes Data Corporation, Park Ridge, N. J., 1976.

3. Garrett, W. S., and Campbell, L. T., *Design & Construction of Underground Bulkheads and Water Barriers*, 7th. Commonwealth Mining & Metalurgical Congress, Johnesburg, Vol. 3, 1283–1301, 1961.

4. Halleburton Company, *New Mine Sealing Techniques for Water Pollution Abatement*, Federal Water Quality Administration, U.S. Department of the Interior, March 1970.

5. Holuber, I. and Penrose, R. G., Jr., *Laboratory Study of Self-Sealing Limestone Plugs for Mine Openings*, EPA-43019-73-011, 1973.

6. HRB-Singer, Incorporated, *Detection of Abandoned Underground Coal mines by Geophysical Methods*, Environmental Protection Agency and the Pennsylvania Department of Environmental Resources, Project 14010EHN, April 1971.

7. Moebs, N. N. & Krickovic, S., *Air Sealing Coal Mines to Reduce Water Pollution*, BOMRI 7354; 1970.

8. Penrose, R. G., Jr. and I. Holubec, *Laboratory Study of Self-Sealing Limestone Plugs for Mine Openings, EPA-67012-73-081, 1973.*

9. Stoddard, C. K., *Abatement of Mine Drainage Pollution by Underground Precipitation, EPA-67012-73-092, 1973.*

10. U.S. Environmental Protection Agency, *Processes, Procedures and Methods to Control Pollution From Mining Activities*, EPA-43019-73-011, 1973.

11. U.S.E.P.A. Criteria For Developing Pollution Abatement Programs for Inactive And Abandoned Mine Sites, EPA-440-9-75-008, 1975.

Proposed Section 817.13 would provide for the sealing or managing of openings to prevent people, animals, and machinery from entering the opening. Sealing can also prevent or reduce the discharge of acid mine water. The formation of acid water is a naturally occurring phenomenon which results from the oxidation of iron pyrites in the presence of water. Coal mining operations disturb the soil and rock material containing the pyrites and can greatly enhance the formation of acid drainage. The acid water draining from the coal mine enters streams and greatly reduces the useability of these waters for human or industrial consumption. Sealing of openings is one method of controlling the production of acid water from mines. An abandoned above drainage drift mine can be sealed, flooding the mine and thus stopping the oxidation of pyrite. Sealing also prevents acid water by preventing the entrance of water and air into the mine.

One alternative that was considered was not to seal or manage the holes at all. This was rejected because the openings present a large potential danger to man and the environment. Passage of water often can be prevented by inserting of drill cuttings, concrete plugs, or other material into the borehole to form a seal.

Proposed Section 817.14 would provide that all mine entries which are temporarily inactive but have a projected useful service be barricaded, fenced, and posted to identify the hazardous nature of the opening. Specific standards for barricades and construction materials to protect the mine entries were considered in the formulation of the regulation. However, the Office elected to propose generalized standards for mine entry protection at this time. Public comment on this issue of general standards versus specific standards for mine entry protection is invited.

The proposed regulation also would require that protective devices be periodically inspected and maintained in good operating condition. Various inspection periods were considered in the formulation of the regulations but no set time period (e.g. monthly, weekly basis) was included because the inspection period depends on the hazard of opening, type of protective device, and condition of the opening. The number of inspections must be frequent enough to ensure that the protective devices are in good operating condition and safe.

Many different types of sealing techniques were considered in the development of proposed Section 817.15 but no specific technique was universally acceptable for sealing all underground openings. Mine sealings may involve construction of a physical barrier across a mine opening to prevent passage of air, water, or persons and wildlife. The ultimate water level behind the seal is, however, seldom controlled, and excessive pressure can build up, resulting in a mine seal blow-out. Sudden release of large quantities of water can have devastating downstream effects. *See Commonwealth* v. *Barnes and Tucker Co.*, 452 Pa. 77 (1974). Mine seals may be designed to retain large quantities of water, but sealing leakage and failures generally occur from natural zones of weakness such as outcrop fractures. The natural rock and mineral surrounding the seal area is usually fractured, fissured, uneven and unstable. If adopted, the regulation would require that the seal must prevent the flow of water from the openings, except as otherwise authorized by the regulatory authority. Regulatory authorities would have the latitude to require the design of sealing and monitoring programs on a mine-by-mine basis so that catastrophic plug failures are prevented. Of course, if drainage from underground working is unavoidable, despite the use of the best available methods of sealing, then the resulting discharge to any surface or groundwater must be controlled so as to achieve the effluent limitation of section 817.42 of this Part.

§§ 817.21–817.25 Topsoil

These proposed sections are substantially identical to the corresponding Sections of proposed Part 816. The reader is referred to the preceding portions of this Preamble discussing Part 816 for information concerning the technical basis and statutory authority for these Sections. In addition to the Sections of the Act cited in those portions of the Preamble, these proposed Sections are based on Section 516 of the Act. While OSM considers the appropriate topsoil requirements to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§§ 817.31–817.38 Road construction

These Sections are substantially identical to the corresponding Sections of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for these Sections. In addition to the Sections of the Act cited in those portions of the Preamble, these Sections are based on Section 516 of the Act. While OSM considers the appropriate road requirements to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these

types of mining should appropriately be reflected in the regulations.

§ 817.39 Support facilities and utility installations

This proposed Section is substantially identical to the corresponding Section of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the approach and statutory authority of this Section. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While OSM considers the appropriate support facility and utility installation requirements to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§§ 817.41–817.57 Hydrologic balance

With the exception of Section 817.50 and a posssible Section 817.51, all of these proposed Sections are substantially identical to their corresponding Section in Part 816. The reader is refered to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority. In addition to the Sections of the Act cited in those portions of the Preamble, these Sections of Part 817 are based on Section 516 of the Act. While OSM considers the effects on the hydrologic balance to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

Section 817.50 provides for the protection of the mining area's hydrologic balance by requiring that mining operations be conducted so as to preclude uncontrolled discharge of mine water. Uncontrolled discharges (mine drainage) have been a primary cause of adverse impacts upon water quality and ecology in the past (Biesecker and George, 1966; Braley, 1954; Grubb and Ryder, 1972; Sidio and Mackenthun, 1963; Turner, 1958; and Warner, 1973). However, this problem can be controlled in underground mines through the proper location, design, construction, utilization, and sealing of drifts, adits, and slopes (EPA, 1973). Use of these methods to control drainage during the active mining phase is to be supplemented with collection and conveyance of drainage to treatment facilities as necessary to comply with applicable standards and limitations prior to discharge to receiving streams. The outright prohibition on gravity discharges from certain new drift mines is required under paragraph 516(b)(12) of the Act.

The Office considered requiring all drift mines which are opened after the effective date of this Part to comply with proposed subsection 817.50(c), rather than making the requirements applicable only to mines opening after approval of the State or Federal program. The Office believes that until a regulatory authority is identified and approved by the Secretary and empowered to administer a regulatory program, it will be unfair to the operator to make this provision apply, since determination of whether a coal seam involved is "acid-producing" or "iron-producing" would not have been made. Public comment on this issue is solicited, however.

Section 817.51 was originally established to identify requirements necessary to protect the recharge capacity of aquifers affected by the underground mining activities. However, since the structural integrity of water bearing formations should not be significantly affected by underground mining, the recharge capacity of the formations should be maintained without any special precautions. Consequently, Section 817.51 has been omitted from the draft regulations. Comments are solicited as to any requirements that may be needed to protect the recharge capacity of water bearing formations from underground mining activities.

§ 817.59 Coal recovery

This proposed Section addresses two persistent problems of coal development: loss of resource when a mining operation does not recover all the available coal at a mining site and recurrent environmental degradation when a land is reentered after one mining operation to recover such coal. The regulation requires the operator to conduct mining operations so as to maximize resource recovery by mining all available coal at a mine site which it is economically feasible to extract.

The Authority for this proposed Section is found in Sections 102, 201, 501, 503, 507, 510, and 516 of the Act.

Alternatives similar to these considered for proposed Section 816.59 were considered by the drafters, and the reader is invited to refer to the Preamble portion on Section 816.59 for further information on issues considered. In addition to those issues, a more fundamental one might be addressed by commenters, and that is the appropriateness of a coal recovery standard for underground mining. In this regard, the reader is referred particularly to Sections 102(k) and 515(b)(1) of the Act.

§§ 817.61–817.68 Use of explosives

Sections 817.61–817.68 are being proposed as regulations to protect the lives and property of the public, underground mines, and ground and surface waters outside of permit areas, from adverse effects of blasting performed on the surface, where surface blasting is required in the development and support of underground mining operations. The interim regulatory program has no provision for regulating surface blasting required for the development and support of underground mining operations. However, surface activities in support of underground mining often require fairly large blasts for facing up at adit entries for leveling ground for surface structures, and initial blast rounds for shafts and adits. These blasts may present damage and injury hazards equivalent to those of surface mine blasting. To protect the public from the adverse effects of these blasts, Sections 817.61–817.68 are required.

Several Sections of the proposed regulations for surface blasting in support of underground mining are substantially identical to the proposed regulations for surface mine blasting (Sections 816.61–816.68). Rather than repeat the discussion of those Sections, the reader is referred to the appropriate Sections of the surface coal mine performance standard Preamble, which contains the rationale for many of the proposed blasting rules and a discussion of alternatives considered.

Sections 817.61–817.68 are proposed under Sections 102, 201, 501, 503, 504, 516, and 719 of the Act.

Materials used by OSM to develop these regulations include—

1. Ashley, C., and Parkes, D.B., 1976, *Blasting in Urban Areas: Tunnels & Tunnelling* (British Tunnelling Society), Sept. 1976, p. 60–67.

2. Grim, E., and Hill, R., *Environmental Protection in Surface Coal Mining* (U.S. Environmental Protection Agency, No. 1BB040).

3. Barnes, Jack (John B.), 1977, *The Effects of Strip Mine Blasting on Residential Structures—Ayrshire Mine, Warrick and Vanderburgh Counties, Indiana:* Paper presented to the Indiana Academy of Science, Indianapolis, Ind., Oct. 28, 1977, 19 p. (Author is associated with Indiana State University Evansville, Evansville, Ind.)

4. Kentucky Department of Mines and Minerals, 1977, Laws and regulations governing explosives and blasting: Lexington, Ky., p. 1.

5. Maryland Geological Survey, Bureau of Mines, 1973, Blasting restrictions, Regulations governing blasting in Bituminous coal strip mines and auger regulations; Maryland Department of Natural Resources Rules and Regulations, p. 23.

6. Medearis, Kenneth, 1976, *The Development of Rational Damage Criteria for Low-Rise Structures Subjected to Blasting Vibrations*—a report of the National Crushed Stone Association: Kenneth Medearis Asso-

ciates, Fort Collins, Colo., and Valley Forge, Pa., 94 p. (duplicated report).

7. Miller, P.H., (no date), *Blasting vibrations and air blast:* Park Central, Ill., Atlas Powder Co., 16 p.

8. Nicholas, H.R., Johnson, C.F., and Duvall, W.I., 1971, *Blasting vibrations and their effects on structures:* U.S. Bureau of Mines Bulletin 656, p. 13–29.

9. Old Ben Coal Company, Comments to Office of Surface Mining (1978).

10. Pennsylvania Department of Environmental Resources, Rules and Regulations, Title XXV, Pennsylvania Code, Ch. 211.

11. Siskind, D.E., 1977, *Structure vibrations from blast produced noise,* in 18th International Rock Mechanics Symposium, June 1977, Keystone, Colo.: Proceedings, p. 1A3–1–1A3–5.

12. Siskind, D.E., Stachura, V.J., and Radcliffe, K.S., *Noise and vibrations in residential structures from quarry production blasting—measurements of six sites in Illinois:* U.S. Bureau of Mines Report of Investigation R.I. 8168, p. 17. 1976.

13. Siskind, D.E., and Stachura, V.J., 1977, *Recording system for blast noise measurement:* Sound and vibrations Journal, p. 20–23.

14. Siskind, D.E., and Summers, C.R., 1974, *Blast noise standards and instrumentation:* U.S. Bureau of Mines, Environmental Research Program, Technical Progress Report TPR 78, p. 16, table 4.

15. Coal Mine Health and Safety Act of 1977; 75 CFR, Subpart N.

16. *An Investigation into Delay Blasting,* 1975, NSF Contract APR 75–05171 to the University of Maryland and Subcontract #M–218907 to Martin Marietta Laboratories.

The Office considered including a proposed Section 817.63 to require that underground coal mine blasting be conducted in accordance with appropriate MSHA requirements set forth in CFR 75-Subpart N. However, it was considered that such a requirement would not advance the purposes of the Act and that MSHA could adequately enforce its own requirements. Public comments are elicited on the appropriateness of the alternative the office rejected.

Proposed Section 817.65 states that this Section applies only to blasting conducted on the surface. Rather than require a blasting schedule similar to Section 816.64 of the proposed surface coal mine regulation, this section would require a 24-hour notice prior to any surface blasting in support of underground coal mining. Because of the occasional, sporadic nature of surface blasting in support of underground coal mining, the public will be better served by receiving notification the day before any blasting is done. The mine operator will be relieved of the task of publishing and republishing a blasting schedule. The remainder of Section 817.65 is identical to Section 816.65 proposed for surface coal mine blasting. The reader is referred to that Section portion of the Preamble which discusses proposed Section 816.65 for detailed discussion.

Proposed Sections 817.61, 817.62, 817.66, 817.67, and 817.68 are substantially identical to proposed Sections 816.66, 816.67, and 816.68. The reader is referred to the appropriate portions of the Preamble to Part 816 for detailed discussion.

§§ 817.71–817.73 Disposal of underground development waste and excess spoil

The Office believes that underground development waste disposal operations should be required to be conducted in the same manner as excess spoil disposal in surface mining. Accordingly these proposed Sections are similar in all significant details to proposed Sections 816.71–816.73. The reader may find a discussion of the technical basis, authority, and alternatives considered in the Preamble.

In addition to the Sections of the Act cited in the discussion of Sections 816.71–816.73 these proposed Sections 817.71–817.73 are based on Section 516 of the Act.

The public is requested to comment on any appropriate basis for varying the requirements for underground development waste fills from those proposed for excess spoil in proposed Sections 816.71–816.73.

§§ 817.81–817.88 Coal processing waste

These proposed Sections are substantially identical to the corresponding Sections of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for these Sections. In addition to the Sections of the Act cited in those portions of the Preamble, these Sections are based on Section 516 of the Act. While the Office considers coal processing waste consideration to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in these types of mining should appropriately be reflected in this portion of the proposed regulations.

§ 817.89 Disposal of non-coal wastes

This proposed Section is substantially identical to the corresponding section of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for this Section. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While the Office considers the appropriate disposal of noncoal waste to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in these types of mining should appropriately be reflected in the regulations. In particular, comments are solicited on the appropriateness of the disposal of noncoal waste, both from onsite and from offsite, in abandoned underground workings.

§§ 817.91–817.93 Coal processing waste: Dams and embankments

These proposed Sections are substantially identical to the corresponding Sections of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for these Sections. In addition to the Sections of the Act cited in those portions of the Premble, these Sections are based on Section 516 of the Act. While the Office considers the appropriate coal processing waste dams and embankment considerations to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in these types of mining should appropriately be reflected in the regulations.

§ 817.95 Air resources protection

This proposed Section is substantially identical to the corresponding Section of proposed Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for this Section. The only provision of a substantial nature that was deleted from this Section for underground mining addressed the problem of fugitive dust resulting from wind erosion on spoil piles. This problem is greatly reduced when considering underground mining because less spoil is stored on the surface. As a result, the spoil disposition need not be required to be oriented in the same manner as in surface mining operations. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While the Office considers the effect on air resources to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§ 817.97 Protection of fish and wildlife

This proposed Section is substantially identical to the corresponding Section of Part 816. The reader is referred to the appropriate portion of the Preamble for Section 816.97 for information concerning the technical basis, al-

ternatives considered, and statutory authority for this Section. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While the Office considers the appropriate fish and wildlife requirements to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§ 817.99 Slides and other damage

This proposed Section is substantially identical to the corresponding Section of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning this Section. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While the office considers the risks of slides to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in these types of mining should appropriately be reflected in this portion of the regulations.

§ 817.100 Contemporaneous reclamation

This proposed Section is substantially identical to the corresponding Section of Part 816. The reader is referred to the appropriate portions of the Preamble for Section 816.100 for information concerning this Section. In addition to the Sections of the Act cited in those portions of the Preamble this Section is based on Section 516 of the Act. While the Office consider the needs for contemporaneous reclamation to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations. In particular, the office solicits public comment on the possibility of enumerating in this proposed Section those long-term structures and sites for which this requirement may need modification.

§§ 817.101–817.103 Backfilling and grading

These proposed Sections are substantially identical to the corresponding Sections of Part 816, except that some of the proposed requirements of Sections 816.101–816.105 have been deleted where the relatively small amount of overburden moved in underground mining has led the Office to conclude that the proposed requirements would be inappropriate (e.g., 816-101(a), 816.104, and 816.105). The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for these Sections of 817. In addition to the Sections of the Act cited in those portions of the Preamble, these Sections are based on Section 516 of the Act. While the Office considers the adverse effects of uncontrolled overburden handling to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, except where indicated, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§ 817.106 Regrading or stabilizing of rills and gullies

This Section is substantially identical to the corresponding Section of Part 816.106. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for this Section. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While the office considers the needs for correction of gullying to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§§ 817.111–817.117 Revegetation

These proposed Sections are substantially identical to the corresponding Section of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for these Sections. In addition to the Sections of the Act cited in those portions of the Preamble, these Sections are based on Section 516 of the Act. While the office considers the needs for revegetation to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§§ 817.121–817.126 Subsidence control

The proposed regulations on subsidence are intended to ensure that underground mining is conducted so as to protect the health and safety of the public, minimize damage to the environment, and protect the rights of landowners by reducing subsidence-caused material damage to the land surface, by improving mining methods, and by maintaining the value and potential of the land.

These Sections are issued under the authority of Sections 102, 201, 501, 503, 504, 510, 516, 517, and 522 of the Act.

Technical literature relied upon in writing these regulations include:

1. "Acid Mine Drainage and Subsidence—Health and Ecological Effects of Increased Coal Utilization," Hill, Ronald D. and Bates, Edward R., Resource Extraction and Handling Division, Industrial Environmental Research Laboratory-Cincinnati, U.S. Environmental Protection Agency, Cincinnati, Ohio 45278, 1977.
2. "A Comprehensive Program for Dealing with Mine Subsidence," ARC Report 73-163-1559, prepared by Michael Baker, Jr., Inc., Beaver Pennsylvania, and the Institute of State and Regional Affairs. The Pennsylvania State University, Middletown, Pennsylvania, for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Enviromental Resources, Harrisburg, Pennsylvania, 1976, Chapter 6, pages 49-51.
3. "Subsidence Engineers Handbook", National Coal Board (British), Production Department, London, 1966, 1974.
4. Architectural Measures to Minimize Subsidence Damage, ARC Report 73-111-2551, prepared by Michael Baker, Jr., Inc., Beaver, Pennsylvania, for the Appalachian Regional Commission, Washington D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1974.
5. "Overview of Subsidence Potential in Pennsylvania Coal Fields," ARC Report 73-111-2552, prepared by HRB-Singer, Inc., State College, Pennsylvania, for the Appalachian Region Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1975.
6. Grey, R. E., Gamble, J. C., McLaren, R. J., and Rodgers, D. J., "State of the Art Subsidence Control", ARC Report 73-111-2559 prepared by General Analytics, Inc., Monroeville, Pennsylvania, for the Applachian Regional Commission, Washington, D.C., and the Department of Environmental Resources, Harrisburg, Pennsylvania, 1974, part 2.
7. "Use of Photo Interpretation and Geological Data in the Identification of Surface Damage and Subsidence," ARC Report 73-111-2554, prepared by Earth Satellite Corporation, Washington, D.C., for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1975, pages 35-37.
8. "Local and State Regulatory Powers Dealing with Land Use and Construction in Subsidence Prone Areas," ARC Report 73-163-2557, prepared by Mullin L. Lonergan Associates, Inc., Philadelphia, Pennsylvania for the Appalachian Regional Commission, Washington, D.C., and the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania, 1975, Appendix A.
9. U.S. Congress, 95th, 1st session, House Rept. 95-128, 1977, Surface Mining Control and Reclamation Act of 1977, Report

of the Committee on Interior and Insular Affairs, House of Representatives, to accompany H.R. 2, p. 126-10. U.S. Department of Interior, 1976, Final environmental impact statement on surface subsidence control in mining regions: U.S. Bureau of Mines FES 76-58, 90 p.
10. U.S. Department of Interior, 1976, Final Environmental impact Statement on Surface subsidence control in mining regions: U.S. Bureau of Mines FES 76-58, 90 p.
11. National Coal Board, 1963, Principles of subsidence engineering: Production Department Information Bull 63/240, 21 p., London, UK.,
12. Dunrud, C. R. 1976, Some engineering geologic factors controlling coal mine subsicence in Utah and Colorado: U.S. Geological Survey Professional Paper 969, 39 p.
13. Brauner, G., 1973, Subsidence due to underground mining: I. Theory and practices in predicting surface deformation: U.S. Bureau of Mines Info-Circ 8571, 55 p.
14. Battelle Columbus Laboratories, 1975, A systems approach to underground mining: Phase I problem analysis and research recommendations, 282 p.
15. Campbell, J. A. L., Petrovic, L. J., Mallis, W. J., and Schulties, C. W., 1975, How to predict coal mine roof conditions before mining: Mining Engineering, October, pp. 37-40.
16. Vandale, A. E., 1967, Subsidence—a real or imaginary problem: Mining Engineering, September pp. 86-88.
17. Horn, G. H., 1977, Memorandum on subsidence requirements—coal: U.S. Geological Survey memo to mining supervisors.
18. Allen, A. S., 1976, Basic questions concerning coal mine subsidence in the United States: Assn. Engr. Geologists Meeting, April 1976, 19 p.
19. Amuedo and Ivey, "Ground Subsidence and Land use considerations over coal mines in the Boulder-Weld Coal Field, Colorado", Amuedo and Ivey Geological consultants, 1975.
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Section 516(b)(1) of the Act requires underground mine operators to "adopt measures consistent with known technology in order to prevent subsidence caused material damage to the extent technologically and economically feasible, provided that room and pillar mining shall not be prohibited." If no subsidence control measures are adopted there is the possibility of material damage to private dwellings (National Coal Board, 1974; Baker, 1974; Amuedo and Ivey, 1975; Voight and Pariseau, 1970; and Brauner, 1973), public facilities such as schools, bridges (National Coal Board, 1974), gas and electrical utilities (GAI, 1977, sewers (National Coal Board, 1974), water resources such as springs and farmland (Dunrud and Osterwald, 1978).

Clearly, it is desirable to conduct underground mining in a manner such that the time and extent of subsidence can be defined. Damage due to subsidence can occur as much as 100 years after mining (GAI, 1977) due to long term instability of mine pillars indicating the need for proper subsidence control measures in order to "maximize mine stability."

Subsidence effects can extend off the mining site (National Coal Board, 1974; Baker, 1974; HRB-Singer, 1975; and Grey, et al., 1974) at angles (Measured horizontally from the edge of mining) varying from 35b-70b (Brauner, 1973) resulting in damage to structures not directly situated over the mining site. Determination of on and off-site subsidence requires consideration of coal thickness mined, mining geometry and dimensions, and the nature of over and underlying strata (National Coal Board, 1974; Brauner, 1973; GAI 1977; and Voight, 1970). Determination of the effects of subsidence on structures and other facilities requires consideration of subsidence caused ground strains and deflections and the nature of the structures themselves (National Coal Board, 1974; Brauner, 1973 Voight, 1970; Brauner, 1973-a; and Pennsylvania DER, (no date). Therefore, adequate definition of the time and extent of subsidence and the prevention of material damage requires careful consideration of the value and use of the land surface, detailed knowledge of the geologic and mining characteristics of the site (Osterwald, 1961, 1962), and proper attention to geotechnical design principles.

Technology is available to minimize and reduce subsidence-caused material damage for both the standard room and pillar mining method and other methods such as longwall mining which are currently used in this country. Excellent protection of sensitive surface features such as urbanized areas and important historic cultural features, or farmland can be achieved by refraining from mining underneath and adjacent to these features, as, for example, provided for with respect to perennial or intermittent streams in Section 817.57. Such protection is currently required in Pennsylvania for protected structures consisting of public buildings, dwellings, and cemeteries when the mine operator cannot post bond or does not have approved financial statements. Similar protection is required by MSHA for oil and gas wells.

Subsidence control can be achieved for other structures by limitations on coal extraction when using the room and pillar method (Curtis, 1968). Protection of the surface can be achieved when using longwall mining by a variety of techniques. Coal extraction as high as 60-70% has been achieved using longwall panel and pillar systems while significantly limiting subsidence damage (Wardell, 1969). A large portion of a major harbor in Germany was lowered more than 1 meter with minimal damage due to subsidence, by careful control of mining (Legget, 1972). Simultaneous harmonic extraction of superimposed coal seams and special arrangements of the mine workings and overlying structures can be used to limit damage (Brauner, 1973; Kratzsch, 1964; Osterwald, 1961, 1962). Generally longwall mining results in predictable and controlled subsidence that is 90-95% completed by the termination of mining (National Coal Board, 1974; Brauner, 1973; Wardell, 1969; Voight, 1970; and Brauner, 1973-a) whereas room-and-pillar mining, especially at shallow depths, may result in subsidence at a much later date (Amuedo and Ivey, 1975; GAI, 1977; Dunrud and Osterwald, 1978).

A preventative measure to reduce material damage from subsidence is to reinforce or design surface structures to resist the stresses imposed on them by subsidence caused ground movements (National Coal Board, 1974;

Pennsylvania DER, 1974; Voight, 1970; and Brauner, 1973-a). Placement of fill either hydraulically or pneumatically behind a longwall face can significantly reduce subsidence (Brauner, 1973) and backfilling through surface bore holes has been used by the U.S. Bureau of Mines in an attempt to limit subsidence over abandoned room and pillar mines (DOI, 1976).

Section 817.123 would require mine operators to inform landowners and other persons, whose property may be affected by subsidence, of the location, dates, probable effects on structures of subsidence, and of the subsidence control measures to be effected by the operator, every 6 months during mining. Provision is made for landowners to request and receive a premining survey of their property. The intent of proposed Section 817.123 is to protect the rights of landowners by providing them with advance information necessary to enable them to protect their property. Persons who may be affected adversely by subsidence and must be informed under the requirements of proposed Section 817.123 include private landowners, tenants, municipalities, public and private utilities, and persons with a legal interest or appurtenance that could be affected adversely by subsidence.

The 6 month notification is provided so that the landowner will be informed of the potential for subsidence damage to his property prior to its being undermined. The 6 month requirement allows a reasonable length of time prior to the likely onset of subsidence so that damage-control measures can be implemented, and adverse effects of subsidence can be mitigated.

Notification of the landowner by the advent of subsidence itself poses a danger to the life and property of the landowner since subsidence may break gas, electrical, and water lines (GAI, 1977), and is clearly unacceptable. Utilities, municipalities, and industries must be advised as to when disruptions are imminent and must be allowed adequate time to protect against loss of power, gas, or water services. If landowners are to assure their rights by means such as insisting that proposed subsidence controls be modified or petitioning to have their land declared unsuitable for underground mining as allowed by Section 522(c) of the Act, then they must be informed of the possibility of subsidence affecting their land prior to its occurrence.

Dwellings or other buildings already constructed may be partially protected against subsidence by reinforcement of sensitive parts such as windows or doors and by isolating the structure from lateral ground movement by ditching around its periphery (National Coal Board, 1974; Pennsylvania DER, 1974; and Voight, 1970). New structures can be designed to resist subsidence by incorporating flexible superstructures, flexible pipelines with telescopic joints, special sliding or rigid raft type foundations and by locating the long axis of the building properly with respect to mining (National Coal Board, 1974; Pennsylvania DER, 1974; Voight, 1970; and Pennsylvania DER, (no date). The requirement to identify mining areas, dates and probable effects of surface subsidence (subsections (a), (b) and (c) of proposed Section 817.123) is necessary for advisement of the landowner so as to enable him to implement precautionary measures.

Proposed Section 817.125, is intended to protect the rights of landowners, by providing for a valid comparison of surface conditions before and after subsidence. If requested by the landowner, a survey shall be conducted of the surface of the landowner's property and a report of the survey prepared by persons approved by the regulatory authority.

To accurately determine whether subsidence has caused material damage to property, to the hydrologic balance, to agricultural productivity, to aquifers, or to fish, wildlife and related environmental values it is necessary to make a valid comparison of conditions existing before and after the land surface has subsided. Premining baseline information and postmining informaiton are necessary in order that a valid assessment of the effects of mining can be made.

Schools, hospitals, public utilities and other public structures also must be surveyed for premining conditions and the report filed with the regulatory authority so as to permit evaluation of damage to public property. Since the public is the landowner of public land, the regulatory agency as a recipient and keeper of all survey reports will maintain a file of reports on public structures.

Specialized geotechnical and architectural skills may be required to assess accurately the condition of structures, springs, wells and other features before mining and to distinguish such damage as may be caused by subsidence and damage caused by natural and other man-made processes. For instance, masonry structures can be cracked by differential stressing, uneven settlement caused by loss of bearing capacity of the foundation, or by tension or compression caused by subsidence (National Coal Board, 1974; Voight, 1970). Springs may go dry from natural fluctuations in rainfall or by subsidence destruction of the aquifer. In order to assure accurate assessment of subsidence damage, accurate record keeping, proper interpretation of premining conditions, and generally reliable results, the persons conducting the premining survey and preparing the survey report should be well versed in the appropriate fields of civil engineering, hydrology, architecture, and geotechnical engineering. For this reason, regulatory authority approval is proposed.

Special attention should be given to springs, wells, reservoirs and other water systems used for human or animal consumption or agriculture in order to accurately assess disturbances to the hydrologic balance, disturbances to fish, wildlife, and related environmental values and, of potential agricultural productivity. Underground mining can disrupt springs (Dunrud, 1976), and subsidence can divert surface water flow and groundwater into mine openings. The addition of moisture to some coals enhances the possibility of spontaneous combustion, giving rise to coal mine fires (Dunrud and Osterwald, 1978).

Section 817.126 would require underground mine operators to consult with surface landowners.

The drafters considered and rejected alternative language which would have required the operator to assume liability for subsidence damage, purchase a non-cancellable property damage insurance policy in favor of the surface owner or offer the landowner the right to purchase the coal underlying his property, in order to preserve the existing natural support for the surface.

Precedent exists for the requirement to offer the right to purchase subsurface support in the Pennsylvania Bituminous Mine Subsidence and Land Conservation Act (Curtis, 1968). However, the option of offering the surface owner an opportunity to purchase adequate coal in place to support his surface structures is not always a viable option; especially in the case of a coal seam several hundred feet below the surface and considering an angle of draw of 30-35°, the value of coal that must be left in place can easily exceed the market value of the surface structure. Accordingly, this alternative was rejected.

The requirement for a subsidence monitoring plan is justified earlier in this Preamble in the discussion of Section 784 as it relates to the subsidence monitoring plan. If the plan is not adhered to there is no assurance that material damage will be prevented.

Under Section 517(b)(1)(c) of the Act the regulatory authority can require the mine operator to "install, use, and maintain any necessary monitoring equipments or methods". Special subsidence monuments and increased precision of subsidence measurement may be required in order to adequately understand the nature of subsidence, and institute measures to prevent material damage to fragile or

historic lands, to sites with unique cultural, esthetic, or environmental values, or to lands where there is a dispute or doubt as to likely subsidence. The number and location of subsidence monuments and the degree of precision of monitoring is dependent on the sensitivity of the surface feature to subsidence ground movements. Some land (e.g. grassland or pasture) may be able to withstand significant lowering in elevation and even surface crackings if the cracks fill in quickly and a high precision of monitoring might not be necessary. Structures may be lowered appreciably without damage in some cases, but extension of only 0.1 foot (National Coal Board, 1974; Pennsylvania DER, 1974, Voight, 1970; and Brauner, 1973-a) can cause cracking of plaster which would be sufficient to materially damage historic buildings or sensitive archeological sites. Lowering the land surface only slightly may flood and destroy vegetation in wildlife refuges or other areas preserved in a natural state when the water table is close to the surface. Thus, unusual monitoring requirements may be necessary at some sites to ensure close control of subsidence or the value and use of these sites might be irreparably damaged.

An initial subsidence report would be submitted within 3 months of the effective date of the State or Federal program for existing underground mines and proposed mines pending permit approval. Documentation of the initial condition of the land surface to include elevation and horizontal location of subsidence monuments and the presence and condition of fish, wildlife or other environmental resources, springs, streams, aquifers or other elements of the hydrologic balance, agricultural resources, and urban areas is necessary to determine the effects of subsidence and thus prevent material damage. If no requirement is made to determine initial surface conditions then the effectiveness of any subsidence control measure adopted would be highly dubious and mine operators would not be meeting the requirement to prevent subsidence causing material damage to the extent technologically and economically feasible because:

(1) determination of the surface condition before subsidence is a requirement of existing subsidence control technology; and

(2) operators would not be able to tell whether they were causing material damage or not.

The 3-month period proposed for determining initial surface conditions may not alow adequate time if regulations are issued in the winter and snow covers areas affected by subsidence, or if the areas are numerous and large. The short period also would tend to result in inaccurate measurements of elevation, etc., and correspondingly poor subsidence control. It might be more logical to require documentation of initial surface condition to be submitted anytime before a mine permit issues. The phrase "comprehensive documentation of horizontal and vertical changes of monuments" may be too vague to be of much use. Public comment on these questions would be welcomed by OSM.

Sections 817.121–817.126 are proposed because subsidence is capable of causing large cracks or sink holes (GAI, 1977; Brauner, 1973-a) which could absorb or deflect streams or substantially increase erosion and suspended particulates (Section 516(b)(9) of the Act) if they formed in the stream bed. Diversion or disruption of stream flow or an increase in suspended particulates could severely damage fish, wildlife, and related environmental values (Section 516(b)(11) of the Act) and infringe on the rights of offsite waters users (Sections 102(b) and 516(b)(7) of the Act). Mining under major impoundments of water could create danger to inhabitants of downstream communities if the stability of impoundment dams were affected. Diversion or loss of water in small impoundments could severely damage fish, wildlife, and related environmental values and users of impoundment water. Drainage of impoundment water into mine workings through cracks or sinkholes could flood mine workings and drown underground miners. It should be noted that mining is safely and routinely done under large bodies of water including impoundments and the ocean, for example, in Nova Scotia.

Subsidence is capable of disrupting spring flow (Dunrud, 1976) and the aquifers feeding springs. Subsidence-caused cracking of underground rock strata could potentially allow exchange of aquifer water and lower quality water from other underground water sources, or contamination of aquifer water by polluted surface sources. Disruption of aquifers supplying water to communities damages the rights of community landowners, and disturbs the hydrologic balance and should be prevented.

Precedent for protecting public buildings is provided by the Pennsylvania Bituminous Mine Subsidence and Land Conservation Act of 1966 (Curtis, 1968). Subsidence is capable of creating danger to inhabitants of urbanized areas and public buildings (Section 516(c) of the Act) by the breaking of gas and electrical lines. Additional dangers are that sinkholes may open up overnight under roads, and they may constitute attractive nuisances in the vicinity of homes, schools, or public playgrounds. Subsidence is capable of severely damaging buildings, load bearing walls, tall chimneys or other ancillary structures of public buildings (National Coal Board, 1974; Pennsylvania DER, 1974; Voight, 1970; and Brauner, 1973-a).

Subsidence may severely damage areas adjacent to the mine site as well as directly above the mine workings since subsidence effects extend upwards from the edge of the mine workings at angles of draw from 35-70° and horizontal ground movements are often greatest at the edge of subsided areas (National Coal Board, 1974; Brauner, 1973; Voight, 1970; and Brauner, 1973-a). Thus mining is prohibited in close proximity to public buildings as well as directly underneath, unless it can be shown the buildings will not be damaged or a hazard created. If undermining of public buildings is not prohibited or closely controlled, severe material damage to public buildings will not be prevented, inhabitants of public buildings may be placed in danger and the rights of public land owners will not be assured.

§§ 817.131–817.132 Cessation of operations

These Sections are substantially identical to the corresponding Sections of Part 816. The reader is referred to the appropriate portions of the Preamble for Sections 817.131–817.132 for information concerning the basis and for these Sections. In addition to the Sections of the Act cited in those portions of the Preamble, these Sections are based on Section 516 of the Act. While the Office considers the needs related to cessation of operations to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in the effects of these types of mining should appropriately be reflected in the regulations.

§ 817.133 Postmining land use

This Section is substantially identical to the corresponding Section of Part 816. The reader is referred to the appropriate portions of the Preamble for Part 816 for information concerning the technical basis, alternatives considered, and statutory authority for this Section. In addition to the Sections of the Act cited in those portions of the Preamble, this Section is based on Section 516 of the Act. While the Office considers the needs for postmining land use controls to be sufficiently similar in surface and underground mining to warrant substantially identical performance standards, public comment is invited on how the differences in these types of mining

should appropriately be reflected in the regulations.

PART 818—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—CONCURRENT SURFACE AND UNDERGROUND MINING

The proposed performance standards in Part 818 are applicable during the permanent regulatory program. They are based on standards in Section 515(b)(16) of the Act which provides for issuance of a variance for specific areas within the reclamation plan from the requirements that reclamation efforts proceed a contemporaneously as practical in order to permit underground mining operations to be conducted prior to reclamation. Any person who conducts or proposes to conduct a combined surface mining and with underground mining operation which cannot conform with the requirement for contemporaneous reclamation must obtain a variance as specified in this Part. Under proposed rule 785.18(f), each permit for which a variance is granted shall be reviewed within 3 years of issuance of the permit and within each 3 year period following a review. The regulatory authority may modify a variance if more stringent measures are necessary to ensure compliance with the objectives set forth in proposed subsection 818.12.

Public comment is solicited on the need, if any, for further guidance to regulatory authorities as to the circumstances under which these variances should be available.

PART 819—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS-AUGER MINING

Section 819.11 proposes performance standards for of auger mining. These standards are established to minimize the adverse environmental effects of auger mining such as, degradation of backfilled areas, surface subsidence and excess erosion of reclaimed lands and to ensure maximum recovery of the coal resource.

The following technical literature was used in preparing this proposed Part:

1. Technology of Auger Mining, USBM Report on contract No. S0241050.

October 1975, 78 pages.

2. Operating Practice Changes and Control Modifications to Improve the Safety of Coal Auger Operations, USBM Report on contract No. H0230010. May 1975.

3. The Use of Auger In Surface Mining of Bituminous Coal, USBM Report of Investigations 5325, March 1957.

Auger mining is a specialized method of mining underground from the surface and has been so designated by the Act. The laws of all States treat auger mining as a surface mining method.

Auger mining has had an unfortunate history of being a high-grading operation with little concern for resource recovery. The Act insists that resource recovery be maximized in the auger operation.

The Act requires that access be available to the reserve left after augering. The 250-foot width was determined to be a reasonable estimate of the width of unmined coal necessary to properly support the entries required for underground mining. This width is a minimum, since common practice would be to place three to four twenty-foot wide entries in the 250 foot section.

The 2,500-foot spacing provides frequent intervals where access for underground mining may be developed, although most operations would use only a few of the 250-foot unmined sections for access.

The increase of 50 feet in the width requirement of the unmined Section for each additional seam worked provides an extra margin of safety for future entries that might be developed. The requirement for locating unmined sections in different seams directly above each other protects the entry support in one seam from the structural degradation that would occur if the seam under an unmined Section were to be augered.

The purpose of limiting surface mining to a minimum of 500 feet from underground operations is to prevent the surface operations from endangering the underground miners through such hazards as degradation of roof support or ventilation, flooding, and equipment breakthrough. This required distance is set forth in the Act at Section 515(b)(12). The surface miner could be exposed to such hazards as explosions, highwall collapse, falls into underground openings, flooding and black damp. The environment could suffer damage from release of toxic water, erosion, hydrologic imbalance and fire.

Auger mining is often done to recover reserves not minable by other means and often occurs after other surface and underground methods reach their limits. If there is an adequate knowledge of the conditions to be encountered the location of underground workings augering should be capable of recovering coal close to the underground areas. In a sample of eight auger operations, four operations regularly penetrated underground workings (USBM, 1957). On the other hand, the Office is aware that augering into underground workings may, in some instances, improve airflow and, hydrologic balance, and reduce water problems or pollution.

Augering operations may produce water drainage or shifts in the ground water flow. Also, the presence of oxygen could encourage the ignition of the coal within the seam.

Much of the water discharged by auger holes is toxic, and its discharge into the environment must be of a very limited duration to prevent damage to the environment. To prevent future problems the seal must be made watertight and permanent. Auger holes not emitting water do not pose an immediate environmental hazard. Therefore, a 30 day period is allowed for sealing the holes.

The Office considered a provision which would have stated that in all those cases where the water quality is acceptable, the hydrologic balance will not be negatively influenced, and the water has a stable drainage area, the plugging requirement would be waived if the hole was backfilled with a porous material that would not contribute to water contamination and a permanent path was established to the stable drainage area to protect the backfill from failing due to excessive amounts of water. This proposal was rejected on the grounds that it violates the requirement for an "impervious" seal, as stated in Section 515(b)(9) of the Act, in all cases except where plugging may create a hazard.

At times it is not possible to protect the environment adequately from the effects of auger mining. In these cases, auger mining cannot be allowed.

Auger mining may disrupt the water flows such that a water-tight seal or porous would be incapable of adequately restoring the water flow or quality or stabilizing the backfill.

Auger mining has been generally considered a secondary recovery method because it is used to "high-grade" reserves, a practice that results in low recovery. Recoveries of 25-35% are common. (USBM, 1975 at page 2). Properly planned and conducted auger mining operations can approach underground recovery levels of around 50% recovery. (USBM, 1975 at page 3). Where auger mining might preclude the future use of higher recovery mining methods by either reducing reserves or degrading the structural integrity of the overburden, its use must be prevented.

Since auger mining is a form of surface mining, it must be conducted according to all applicable regulations, including the performance standards in Part 816.

PART 820—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS-ANTHRACITE

This proposed Part 820 sets forth specific performance standards for anthracite coal mines as an exemption to the performance standards proposed

in Parts 816 and 817 of this Subchapter.

The Act requires that State environmental protection standards for anthracite surface coal mines in effect on August 3, 1977, the date of enactment of the Act, be adopted through the issuance of special regulations. The Office believes that Pennsylvania was the only State to have standards in effect on August 3, 1977.

At least 14 laws and regulations have been enacted in Pennsylvania which govern mining and reclamation practices at anthracite coal mines. These laws and regulations appear in Subsection 820.11(a).

In drafting this Part, several different approaches were considered. The existing structure of the proposed standards lists legislation which directly governs the conduct of anthracite surface coal operations. It was proposed by some that these 14 statutes and regulations should be annotated to provide a guide to specific performance standards instead of requiring interested persons to be knowledgable of all 14 laws. Alternatively, the Office might promulgate minimum Federal environmental performance standards incorporating the minimum regulations required by the State. The unannotated listing contained in the proposed draft of this Part was considered acceptable because it will not result in addition of a long, complex set of provisions of limited applicability and because the majority of anthracite is produced in a State which already has specific protection standards in effect.

An issue not explicitly addressed in these proposed regulations is how to regulate anthracite surface coal mining in States which are currently mining or may in the future mine anthracite, but which did not have special performance standards when the Act was enacted. The most straightforward approach would be to impose the minimum performance standards of this Subchapter. The two alternatives are—

(1) To impose environmental protection standards similar to those in Pennsylvania; or

(2) To develop special Federal standards to take into account the unique characteristics of other anthracite deposits. At this time OSM has made a decision not to promulgate additional anthracite regulations.

The Secretary must issue additional regulations as necessary when a State regulating anthracite amends any law or regulations for anthracite mining. If the regulations existing as of August 3, 1977, are made less stringent in any manner, the Secretary may elect to develop specific Federal performance standards to supplement the amended State regulation or, if considered desirable, the Secretary may apply the proposed performance standards for surface mining and underground coal mining.

PART 821—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—CERTAIN MINES IN ALASKA

This Part specifies those variances that are available from the requirements of this Subchapter for certain coal mines in Alaska.

Literature cited for the preparation of the requirements for the variances from the permanent performance standards available for certain mines in Alaska include:

1. Senate Report No. 28; 94th Congress 1st Session; March 5, 1975.

2. "State Surface Mining Laws: A survey, a comparison with the proposed Federal legislation, and background information"; June 1977 95th Congress 1st Session.

3. Congressional Record "Surface Mining Control and Reclamation Act of 1975"; 121 Congress Record 7044; March 18, 1975.

4. House of Representatives Report No. 94-1445; 94th Congress 2nd Session.

There are many special physical, hydrological and climatic conditions that exist in Alaska that are not commonly encountered in other States. Much of the area of the State is tundra, permafrost is abundant, topsoil is often thin or nonexistent, the coal seams often dip 30 degrees or greater. In addition, Alaska has significant coal reserves.

It may be necessary to make minor modifications in the permanent performance standards for certain mines in Alaska. In no manner shall these modifications lower the environmental standards for Alaskan coal mines.

In order to ascertain if, in fact, modifications are needed for Alaskan coal mines, Section 708 of the Act specifies that the Secretary direct a study of surface coal mining operations in Alaska. Within three years after the date of enactment of the Act, the Secretary, based on the findings of the study, is authorized to modify the applicability of any environmental protection provision of the Act, or any regulation issued pursuant thereto, to any surface coal mining operation in Alaska from which coal has been mined during the year preceding enactment of the Act if he determines that it is necessary to ensure the continued operation of such surface coal mining operation.

During that period of time prior to the issuance of any modifications to the regulations, it may be necessary to issue variances to the performance standards of the Act as necessary to ensure continuance of the mining operation. Only those surface coal mining operations that are located in Alaska and from which coal was mined between August 3, 1976, and August 2, 1977 are eligible for variances.

PART 822—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—OPERATIONS IN ALLUVIAL VALLEY FLOORS

Proposed Part 822 contains performance standards for alluvial valley floors that implement the requirements of the Act. The operator would be required to reestablish those geologic, hydrologic, and biologic characteristics that are necessary to support the essential hydrologic functions. It is not intended that all of the characteristics need be reestablished in every case. Rather, only those important to farming or those that control the quality and quantity of water need be reestablished. The Part proposes that the operator monitor the effects of mining and reclamation operations to—

(1) Identify or further describe important geologic, hydrologic, and biologic characteristics; and

(2) Detect conditions signifying interruption, discontinuance, or preclusion of farming or material damage to water.

The procedural requirements developed under Section 822.12, if adopted, would allow the regulatory authority to oversee mining practices that are being employed in alluvial valley floors and to require modification of practices adversely affecting farming or water quality or quantity.

With respect to application procedures and environmental performance standards for alluvial valley floors, OSM considered adding detailed review procedures that would be followed if a "higher or better use" were proposed for alluvial valley floors. These procedures would address the role of State and local planning in reclamation of alluvial valley floors to higher and better uses in accord with Section 515(b)(2) of the act. The Office decided not to propose detailed procedures at this time but invites public comment. The intent of the Act is to avoid interruption, discontinuance, or preclusion of farming on alluvial valley floors large enough to be significant to farming. Section 510(b)(5) is accompanied by the further requirement to preserve and reestablish the essential hydrologic functions of all alluvial valley floors in Section 515(b)(10)(f). Study of the legislative history of the Act leads the Office to conclude that Congress did not intend to promote major changes in land use of alluvial valley floors and that Congress intended the Office's position to be to guide reclamation of mined alluvial valley floors in a manner that preserves the essential hydrologic func-

tions of the alluvial valley floor. Regulatory authorities may choose to be more explicit in defining post-mining land uses of mined and reclaimed alluvial valley floors, but compliance with Public Law 95-87 must be ensured.

The Office is considering the addition of a paragraph to Part 785.19 that would provide further guidance to surface coal mining operations that were in production in the year preceding August 3, 1977, were located within or adjacent to an alluvial valley floor, produced coal in commercial quantities during the year preceding August 3, 1977, and had specific permit approval by the State regulatory authority before August 3, 1977, to conduct surface coal mining operations within an alluvial valley floor. This guidance would implement the requirements of Section 506(d)(2) of the Act by requiring that—

"(a) Applications for a renewal of a valid permit which propose to extend surface coal mining operations beyond the boundaries identified in the reclamation plan approved prior to August 3, 1977, and which propose to extend operations that were excluded from compliance with the criteria of Section 786.13 by virtue of compliance with exclusion of Subparagraph 786.13(k)(1), must comply with all the provisions of Section 786.13 for all new areas located outside the previously identified and approved boundaries; and

(b) All existing surface coal mining operations conducted in or adjacent to alluvial valley floors must comply with the requirements of Part 822 on the effective date of these regulations with respect to those lands subject to these regulations. In order to show compliance, the applications for permits would have to satisfy the application requirements of Section 785.19."

The Office is also considering the necessity of adding a paragraph to Section 805.13 which would allow the regulatory authority to extend the period of liability under a reclamation bond when the cumulative effects of mining and reclamation on a stream, stream channel, floodplain, and associated low terraces cannot be determined in the initial 5 or 10 years because major elements of the watershed are still affected by surface coal mining and reclamation operations. The paragraph could read:

"The regulatory authority may determine, based on the magnitude of the disturbance caused by surface coal mining and reclamation operations over time to a surface drainage watershed that a bond shall be held for a longer period and in an amount adequate to regrade and revegetate the watershed to comply with Parts 816 through 826 of this Title.

Such a statement could be appropriate in the case of an alluvial valley floor in which the surface flow was diverted for the life of the mine and vegetation was reestablished, but stream bank instability, progressive compaction and resulting subsidence of regraded soils, and other problems did not occur until after the entire hydrologic system was evaluated at the termination of mining. This might occur if most runoff was diverted from the reclaimed stream channel until the last area was revegetated. The provisions would provide incentives to complete remedial reclamation. Comments addressing this consideration are invited.

The Office considered adding to proposed Section 822.13 a requirement that ground cover and productivity on reclaimed and other affected areas must be 100 percent of ground cover and productivity. While this proposal has not been included in the proposed rule, public comment is invited as to the desirability of such a requirement in furthering the purposes of this Part.

PART 823—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—OPERATIONS ON PRIME FARMLAND

Proposed Part 823 contains regulations for achieving the requirement of Section 515(b)(7) of the Act and would require that persons conducting surface mining activities on prime farmland, as defined in Section 701.5q, to return such land to equal or better productivity than its pre-mining condition. These sections outline procedures for the systematic removal of soil horizons, stockpiling, site preparation prior to restoration, and systematic replacement of soil horizons.

Technical literature relied upon for the proposed prime farmland regulation in 823.1

823.14 is:

1. Aldon, E. F. 1978. Reclamation of coal-mined land in the Southwest. Soil and Water Conservation, Vol. 33 No. 2. pp. 75-79.

2. Aldon, Earl F., and H. W. Springfield. 1973. *Revegetating coal mine spoils in New Mexico: a laboratory study* USDA For. Serv. Res. Note RM-245. 4 p. Rocky Mt. For. and Range Exp. Stn., Fort Collins, Colo.

3. Argonne National Laboratory. 1978. Land reclamation program. Annual Report. July 1976—October 1977. Argonne, III. pp. 78-83.

4. Bennett, O. L. 1971. Grasses and legumes for vegetation of strip-mined areas. W. Va. Univ., Reveg. and Econ. Use of Surface-Mined Land and Mine Refuse Symp. Proc. 1971: 23-25.

5. Bennett, O. L. 1978. Reclamation of lands disturbed by surface mining. 11th Congress, International Society of Soil Science. Symposia Papers. Volume 3. pp. 249-259. Edmonton.

6. Chapman, A. G. 1967. How stripland grading affects tree survival and growth. Pub. No. 29. School Agr., S. III. University, Carbondale.

7. Grandt, A. F. and Lang, A. L. 1958. Reclaiming Illinois strip coal and with legumes and grasses. Univ. of Ill. Agr. Exp. Sta. Bul. 628, 64 pp., illus.

8. Grandt, A. F. 1978. Mined-land reclamation in the interior coal province. 1978. J. Soil and Water Cons. Vol. 33. No. 2 pp. 62-28.

9. Martin, John, H. 1976. Principals of field crop production, 3rd Ed. McMillam Pub. Co., N.Y., N.Y.

10. Medvick, C. 1969. Selecting plant species for revegetating surface coal mined lands in Indiana—a forty year record. IN: Ecol. and Reclam. of Devastated Land, v. 2. R. J. Hutnik and G. Davis, eds. Gordon and Breach, New York. pp. 65-80.

11. Olson, T. C. 1977. Restoring the productivity of a glacial till soil after topsoil removal. J. of Soil and Water Cons. Vol. 32. No. 3. pp. 130-132.

12. Plass, W. T. 1975. An evaluation of trees and shrubs for planting surface-mine spoils. U.S. Dep. Agr., N.E. For. Exp. Sta. Res. Note NE-317, 8 pp.

13. Plass, W. T. 1972. Chemical soil stabilizers for surface mine reclamation. Northeastern Forest Experiment Station, Forest Products Marketing Laboratory, Princeton, West Virginia.

14. Plass, W. T. 1978. Reclamation of coal-mined land in Appalachia. J. Soil and Water Cons. Vol. 33. No. 2. pp. 56-61.

15. Power, J. F., R. E. Ries, and F. M. Sandoval. 1978. Reclamation of coal-mined land in the Northern Great Plains. J. Soil and Water Cons. Vol. 33. No. 2. pp. 69-74.

16. Ruffner, J. D., and Steiner, W. W. 1969. Evaluation of plants for use on critical sites. In: Ecol. and Reclam. of Devastated Lands, v. 2. R. J. Hutnik and G. Davis, eds. Gordon and Breach, New York. pp. 3-12.

17. Ruffner, Joseph D. 1978. Plant Performance: a Surface Coal Mine Spoil in Eastern United States. USDA, SCS-TP-155.

18. Sandoval, F. M., J. J. Bond, J. F. Power, and W. O. Willis. 1973. Lignite mine spoils in the Northern Great Plains—characteristics and potential for reclamation. In Proc., Res. and Applied Tech. Symposium on Mined-land Reclamation. National Coal Assn., Washington, D.C. pp. 117-133.

19. Vogel, W. G., and Berg, W. A. 1968. Grasses and legumes for cover on acid strip-mine spoils. J. Soil and Water Conserv. 23(3): 89-91.

Proposed Section 823.11 establishes specifications for soil removal, storage, replacement, and reconstruction using minimum standards as set forth in the Act.

Subsection 823.11(b) would require that removal of soil horizons be done

prior to any drilling, blasting, or mining. Few, if any, of the mining operations can be done without the risk of contamination of the soil horizons. The overburden should be protected from erosion. The method of protection will vary by geographic location and the nature of the overburden. Ample data exist to permit the development of adequate vegetative erosion control. (Ruffner, 1978), (Bennett, 1971), (Grandt, 1958), (Medvick, 1969), (Plass, 1975), (Ruffner, 1969), (Vogel, 1969), and (Aldon, 1973).

Proposed Sections 823.12 and 823.14 would deal with the removal and replacement of the various horizons. Since prime farmland soils are defined as those having the best combination of physical and chemical properties for plant growth, there will be few circumstances where it will be more desirable to substitute selected overburden material for A and B horizons in soil reconstruction. Where substitute material could be shown to be equal or more favorable for plant growth than the A and B horizons, its use may result in less costly soil reconstruction and possibly a more productive soil.

Removal and replacement of A and B horizons in their original sequence offers the highest potential for creation of a final root zone of depth and quality comparable to that which existed in the natural soil. Power and others (1978) have shown that reconstruction of Williams silt loam, by replacing topsoil and subsoil in separate layers, was superior to mixing the two materials and achieved wheat yields comparable to those on unmined land during the first growing season. Bennett (1978) has concluded that coal can be removed without destroying the potential productivity of the soil and seriously damaging the environment, through adequate guidelines and specific controls. There is conclusive evidence that topsoil (A horizon) replacement can vastly improve plant survival and growth (Sandoval and others, 1973, Alson, 1978; Grandt, 1978; Argonne National Laboratory, 1978). Olson (1977) found that the most rapid means of restoring soil productivity was to replace all or part of the topsoil and concluded that soil productivity is not likely to decline if such procedures are allowed. Plass (1978) concludes that proper topsoiling involves the removal and storage of the A, B, and C horizons.

In accordance with Section 515(b)(7) of the Act, proposed Subsection 823.11(c) seeks to ensure that steps are taken to avoid the mixing of soil horizons if stockpiled. This is best accomplished by total and complete separation. The area for stockpiling needs to be selected carefully to assure it is not in a drainageway where water containing acids and other toxic materials may cause contamination. The surface of stockpiled materials will be unstable and subject to wind and water erosion. Short-lived vegetative cover or mulches can be effective in controlling erosion (Plass, 1972), Ruffner, 1978; Vogel, 1968. The treatment selected should be based on the length of time between stockpiling and replacement.

Compaction resulting from grading spoil and handling topsoil can be detrimental by adversely affecting root penetration (Chapman, 1976) and rate of water movement in the soil, and proposed Subsections 823.14(b) and (c) attempt to address this problem in a flexible manner. Use of suitable equipment and careful handling of soil material at proper moisture content is essential if excess compaction of the soil rooting zone is to be avoided.

A mulch of hay, straw, wood fiber, or chemical mulch, properly applied, can have a significantly beneficial effect on preventing water or wind erosion of the unstable soil materials (Plass, 1972), and accordingly would be encouraged under proposed subparagraph (c)(2).

As would be required under proposed Subsection 823.14(d), whether the reconstructed soil profile is planted directly to a productive crop, or planted for erosion control, the proper plant nutrients are needed. (Aldon, 1978; Bennett, 1971; 1978; Grandt, 1958; Plass, 1978; Power, 1978; Ruffner, 1978; Vogel, 1968; and Martin, 1976).

Site specific recommendations would be determined by having the soil tested. This can be done through local county agriculture agents. Recommendations on appropriate crops for production or erosion control are available from the county agent or the U.S. Soil Conservation Service.

The Office considered the alternative of exempting underground coal mining from the proposed regulation. The Office believes there would be sufficient environmental impact from the underground coal mining operation to warrant coverage in the proposed regulations. Public comment is solicited on the need for further guidance to regulatory authorities as to the circumstances, under which variances should be available.

PART 824—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—MOUNTAINTOP REMOVAL

Part 824 provides the conditions under which persons engaged in the surface mining method known as mountaintop removal could be exempted from the requirement to restore affected areas to their approximate original contour.

The purpose of allowing this variance is to allow extraction of entire coal seams on mountaintops where it would be feasible to develop alternative land uses, such as industrial, commercial, agricultural, residential, or public facility. Following appropriate land use planning standards, this exemption may provide needed development land in some areas while minimizing long-term effects of disturbance from both mining operations and post-mining land use.

During the drafting of this Part, the Office considered an alternative which would have allowed the regulatory authority to grant a variance to persons who intend to remove only portions of the coal seam along a mountain ridge, leaving several isolated nobs or plateaus in the process. The decision was made, however, to propose that a variance be allowed only in those instances where the person intends to remove the entire coal seam and create one level plateau or a gently rolling contour, in accordance with the clear intention of the Act.

Additionally, the Office decided not to propose this alternative because it would not support the objective of maximum coal recovery and would not assure a contour suitable for the development of the required alternative land uses.

The Office solicits comments and suggestions on how regulatory authorities should treat persons who are currently engaged in a mountaintop removal operation that does not meet the conditions for getting a variance and for whom meeting those conditions through a change in operations would not be economically feasible.

The Office would appreciate public comment on appropriate definitions and restrictions on the meanings of the following terms as used in this Part: "mountain," "ridge," "ill," "agricultural" and "public facility use."

PART 825—SPECIAL PERMANENT PROGRAM PERFORMANCE—STANDARDS—SPECIAL BITUMINOUS COAL MINES IN WYOMING

Part 825 proposes regulations for special bituminous coal mines west of the 100th meridian located in the State of Wyoming. These proposed regulations are intended to minimize, as far as practical, any adverse environmental or other effects of these special mines by proposing practicable standards for on-site handling of spoil, elimination of depressions capable of collecting water, creation of impoundments, regrading, and allowing for retention of certain highwalls.

The literature used to draft these proposed regulations includes:

1. *Land Quality Rules and Regulations* (Wyoming) Land Quality Division, Department of Environmental Quality, 1975.

Two classes of special bituminous coal mines are regarded separately by these proposed regulations—those operating prior to January 1, 1972, and those developed after August 3, 1977. Only those parts of the mine within the mine pit would be regulated by Part 825. All other parts of the permit area would meet the standards set by the remainder of this subchapter.

For mines operating prior to January 1, 1972, which meet the conditions of Section 527(a) there is no practicable alternative means of mining the coal or of reclaiming the lands as required by the Act. Therefore highwalls would be allowed to remain if found to be stable by the regulatory authority, benches would be allowed, the mine pit floor would remain and be graded, topsoiled, and seeded, or be part of an approved impoundment. Any on-site spoil piles would have to be graded and contoured to less than 17° unless the regulatory authority determines that steeper slopes would accomplish the desired reclamation. Terraces would be approved by the regulatory authority if it is demonstrated that desired reclamation results would be achieved by their use.

The Office recognizes that the deep open pit type of coal mining has specific areas where adjustments to the general performance standards are warranted. These areas have been specifically identified as backfilling and grading, since it is not possible to completely backfill and return to approximate original contour or blend the pit with the topography in these cases.

The extreme highwalls involved in deep pit mining of coal cannot be adequately backfilled. However, they can be maintained with proper geological engineering techniques. Part of the stabilization may require benching the highwall to catch small rockfalls, control runoff, and maintain the face heights below the critical height for the material. Since highwall stability is a critical part of the reclamation and this is a very non-typical situation the Office has made provision for special reviews and controls at these sites.

The pit floor would probably be incapable of supporting significant plant growth. To reestablish vegetative cover and allow access for equipment, people, and animals, backfilling, topsoiling, and grading are required. Access must be provided to allow the revegetation equipment to operate and provide for future productive use of the land. The water movement in and around the pit must be controlled. Some impoundments can be expected to be of sufficient size to necessitate the use of riprap to control water damage to impoundment structures.

The slope of spoil piles should be maintained at a low angle (17° maximum) to minimize runoff damage and provide safe side slopes for revegetation equipment. If terraces do not interfere with the reclamation they could be used. High slopes could be used with adequate reclamation and an approved post-mining land use.

For mines on lands adjacent to those operating before January 1, 1972, and developed after August 3, 1977, operations within the mine pit would be required to conform to all requirements of Wyoming law. Slope specifications in this Part are taken from the Wyoming Land Quality Rules and Regulations, Chapter II, Section 1(a), as authorized by Section 201(c)(2), except that the regulatory authority would be designated as the deciding authority rather than the administrator of the Wyoming Land Quality Division.

To blend the mined site with its surroundings, the slopes would be cut to no more than the maximum average slope of the surrounding topography if these Sections were adopted. If this practice would disturb a significant amount of land that would not otherwise be disturbed the regulatory authority could allow steeper slopes. The regulatory authority could independently establish the average slope. The operator's determination of average slope must be reviewed and approved or disapproved by the regulatory authority.

For these recently opened special mines, the regulatory authority would retain the right to decide how backfilling, grading, and contouring will be done to meet the future use of the land, since these are special cases and need to be dealt with on an individual basis. The method chosen must be designed to prevent degradation of the hydrologic balance, reduce water pollution, prevent adverse effects from water build up, control erosion, and control water flow to the original drainage system or an approved substitute would have to be developed.

Terraces or benches, check dams and other erosion control techniques may be required to control water damage to reclaimed slopes where long unbroken contouring cannot control the volume generated or handled seepage or stream flow. These structures may need special engineering; therefore, under the proposed regulations, the regulatory authority would examine and evaluate the detailed plans for all such construction.

The object of regulating reclamation is to produce a usable piece of land after mining. To allow indiscriminate filling of depressions with water would produce small intermittent ponds, bogs, and might create overflow situations eroding slopes possibly endangering people. Depressions therefore, would not be allowed by the proposed regulations without proper planning and design.

If permanent water impoundments were authorized under these proposed regulations, the land would be sloped, graded, and contoured to blend topographically with its surroundings. Access would be provided to allow for corrections to be made, revegetation, future access for new land uses and maintenance of the water control structures. It may be very difficult to reclaim all of the highwall in these pits. Therefore one-half of the shoreline would be allowed to remain as stabilized highwall. The stabilization technique would have to be independently verified and approved by the regulatory authority. Since the pit would impound substantial amounts of water, it would probably have an approved post-mining use which would blend with the surroundings, and part of the pit shoreline would have to be reclaimed for these purposes.

Since the State of Wyoming could change its regulations and programs on special bituminous coal mines, leaving some areas without coverage by regulations, the Secretary will provide the necessary additions to meet the Act.

PART 826—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—OPERATIONS ON STEEP SLOPES

A significant portion of the strippable coal reserves, particularly in the Appalachian region, lies under terrain that is dominated by steep slopes. Surface coal mining operations in this type of terrain are particularly subject to the effects of erosion that result in the formation of deep gullies, excessive runoff, mass movement, and sedimentation of the receiving streams. Part 826 proposes regulations for the minimum standards an operator must meet to control the adverse environmental aspects of steep slope mining.

Proposed Section 826.12 provides performance standards similar to those in the interim program regulations at 30 CFR 716.2 (42 Fed. Reg. 62692, December 13, 1977), except that additional drainage channel requirements are provided and minimum slope stability is specified. The drainage channel addition derives from needs perceived by Office inspectors in the field during the interim program. The static safety factor addition comes from further development of thinking on stability since promulgation of the interim program regulations, as reflected in various proposed Sections published today data, including Sections 816.32, 816.46, 816.85, 816.102, and 824. A minimum safety factor of 1.3 is an appropriate measure of stability that has been accepted by the Corps of Engineers, MSHA, and other agencies. This slope stability for

backfilled spoil material is required for all portions of the reclaimed land.

Section 826.13 proposes to implement the variance from the requirement of return to approximate original contour, which is contained in Section 515(e) of the Act. Some commenters have indicated they feel this variance should not be limited to steep slope mining. However, it is clear in Section 515(e)(2) of the Act that the variance applies only to Section 515(d)(2) requirements, which are those applicable to steep slopes.

PART 827—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—COAL PROCESSING PLANTS AND SUPPORT FACILITIES NOT LOCATED AT OR NEAR THE MINESITE OR NOT WITHIN THE PERMIT AREA FOR A MINE

Coal processing plants are usually located at the mine mouth but frequently one central preparation plant may serve several mines as a focal point for coal preparation and shipment to market. The coal is transported to this central plant without removal of the rock and other impurities contained in the run-of-mine coal. Coal may also be shipped by barge, rail, or truck to a site far removed from the mine-site and processed there prior to use. After shipment to the point of use, additional processing may take place. Associated with coal processing plants are coal wastes, waste piles and disposal sites, and other features which can seriously damage the environment and property and are intended to be regulated by the Act. In order to ensure proper protection of the environment and public property in compliance with Section 102 of the Act, the same requirements for permits, bonding, reclamation, performance standards and enforcement apply to coal processing plants and support facilities not located within the permit area for a specific mine.

Public comment is solicited on the structure of this separate Part. The Office considered establishing minimum performance standards for coal processing plants within Part 816, but has determined that separate regulations are probably appropriate. One issue is the extent to which loading facilities near the coal processing plants should be required to be within the permit area.

PART 828—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—IN-SITU PROCESSING

The proposed rules for in-situ processing are intended to provide environmental protection performance standards for operations which use coal in place or recover coal by means of processing fluids injected into the coal-bearing strata.

Technical literature used in preparing this Part includes:

(1) Edgar et al. Support Research on chemical, mechanical, and environmental factors in Underground Gasification Quarterly Report. July 1, 1978, Univ. of Texas at Austin;

(2) Permit Regulations for Process Discharges/In-Situ Mining, Land Quality Department, Department of Environmental Quality, Cheyenne, Wyoming;

(3) Meade, S. W., Ganow, H. C. and Whang T. T., "Groundwater and Subsidence Investigation of the LLL In Site Coal Gasification Experiment", Lawrence Livermore Laboratory, Proceedings of 4th Annual Coal Conversion Symposium, Steamboat Springs, Colorado, July 17-20, 1978, U.S. Dept. of Energy;

(4) McKee, D. D., Fischer, R. Jacob, Jacobsen, T., Weh, and Drever, J, 1978, "Ground water Problems Associated with Licensing of In Situ Uranium and Coal Gasification Operations," LLL Proc. of 4th Annual Coal Conversion Symposium, Steamboat Springs, Colorado, July 17-20, 1978, U.S. Dept. of Energy.

In-situ processing of coal, an undergound method of extracting fluids from coal in place, has many similarities to underground mining, and it is proposed that in-situ processing meet the general performance standards for conventional underground mining.

The Office might separately define each type of processing and promulgate a set of regulations for each. It is the opinion of the Office that in-situ processing is so diverse and developing so rapidly that the development of individual regulations would not now be appropriate considering that the technical expertise in this area is still developing.

A potential major environmental impact from in-situ processing is the contamination of water systems by the processing fluids (Edgar, p. 44). The proposed rules would alleviate this problem by imposing general restrictions on the discharge of processing fluids (Subsection 828.11(a)).

An alternative method to the proposed general restrictions on discharing processing fluids outside the rising zone would be to set the maximum levels for various contaminants in natural water systems. This alternative was not proposed because of the number and variety of potential contaminants. The proposed regulations would allow the regulatory authority to control the discharge of solid, liquid, or gaseous contaminants which may pose some threat to public health, public safety, or to the environment even though no national standards for levels of these contaminants would be promulgated.

The surface activities accompanying in situ mining are quite similar to those of underground mining, though often reduced in scale. Drill pads, roads, pipeline corridors, gathering and pumping facilities, officers, processing facilities, equipment and supply facilities have the potential to disturb the vegetation and soil. Thus, topsoil protection, stabilization of disturbed areas, and revegetation performance standards are required. Further, the potential for subsidence to be caused by in situ processing also appears similar to that posed by conventional, underground mining, Meade, 1978. Therefore, the need for subsidence control, to the extent available technology allows, is likewise necessary.

It is likely that a few of the performance standards contained in the proposed Part 817 would not be used for current types of in situ mining. These would include those for disposal of underground development wastes and excess spoil, disposal of coal processing waste, blasting (surface activities) and perhaps other categories. There is a future potential for use of modified in situ processing, a process that combines underground mining of access drifts, fracturing of pillars of coal, and in situ extraction. This process could result in the creation of waste rock or underground development waste and the application of the performance standards for "underground development wastes." The Office believes that deletion of these performance standards, which might have little use at present, would not be appropriate at this time since a need for their use might arise in the near future.

An alternative approach would be to limit compliance of in situ activities to a select few of the performance standards such as control of subsidence and protection of water quality. The Office does not believe that the requirements of the Act are adequately met if the remainder of the provisions of the performance standards applicable to conventional underground mining are designated as not applicable.

Part 828 proposes additional performance standards tailored to in situ processing. These are tailored in large part after regulations scheduled to be promulgated in Wyoming ("Permit Regulations for Special Process Discharges/In Situ Mining"—Land Quality Department, Department of Environmental Quality, Cheyenne, Wyoming). Wyoming has obtained input from the Texas Railroad Commission in developing these regulations. The performance standards principally address and specify protective measures for control of fluids injected into and removed from the coal. The fluids may

be gaseous or liquid. It is important that these fluids are largely contained within the production interval or strata. These fluids will contain hydrocarbons (principally phenols). They may also contain nitrogen compounds, and relatively high concentrations of soluble salts. Thus, the performance standards would require the development of a contingency plan to be followed in the event of excursions of fluids beyond the production zone. It is envisioned that this plan would require the installation and operation of surface and subsurface monitors to reliably measure or warn of increases in concentrations of substances that could be toxic or acid or would otherwise pose a danger to public health or safety in order that corrective measures could be employed. The plan should also describe the corrective measures. In situ processing is somewhat different from conventional underground mining in that when injected fluids are detected to have moved beyond the production zone, it may be possible (depending on the reactivity of the fluid) to "retrieve" much of the fluid by pumping or to neutralize the fluid by flushing out to a surface treatment facility.

The performance standards would require the quality of groundwater both within and adjacent to the mine plan area to be returned to the approximate pre-mining quality. This is appropriate in view of the potential for toxic fluids to be created and the need to minimize disturbance to the hydrologic balance, Meade, 1978 and McKee, 1978).

The performance standards propose a more complex monitoring program for air and water quality if there are changes in the ambient levels of phenols, nitrogen compounds, or oxides of carbon caused by the in situ processing. These are likely contaminants produced by in situ operations (Edgar, pp 47-79).

An alternative to the special performance standards would be reliance on the underground mining activities performance standards (Part 817). This alternative could be accomplished by specifically incorporating the term "in situ processing" in the term "underground mining". The Office did not believe that adequate standards were available in Part 817 to fulfill the requirements of the Act to provide environmental protection performance standards for all phases of coal mining.

Another alternative was to expand the permit application requirements to specifically include identification of waste residues, detailed hydrologic data describing "reservoir" characteristics, specifying distances from the production area for environmental monitoring activities, completion data for all existing wells in the area, and similar details that would ensure that adequate data were provided for planning. It was determined that the permit requirements would not be expanded since individual states could develop more detailed requirements suited to specific needs.

Other alternatives would be to specify a method by which the restoration would be accomplished or to specify the degree to which the restoration must be taken considering the rapid developments in the technology for this area. Both these alternatives were considered premature at this time.

The monitoring procedures proposed would provide the regulatory authority with information and indications of any contamination from in-situ processing. The specific groups of compounds mentioned in the proposal reflect common contaminants in processing fluids (Edgar, pp. 47-49).

SUBCHAPTER L—INSPECTION AND ENFORCEMENT

A brief outline of the major features of the proposed regulations follows:

Part 840 contains the minimum requirements for inspection and enforcement by a State where the State is the regulatory authority under a State program or a cooperative agreement. Included in this Part are provisions relating to the types and frequency of inspections, enforcement authority and the availability of records, reports, inspection materials or information obtained by a State.

Part 842 sets forth the procedures applicable to Federal inspections in the permanent regulatory program. Section 842.11 describes the circumstances under which Federal inspections are to take place as well as the frequency and nature of those inspections. Section 842.12 outlines the requirements for Federal inspections following citizen requests as well as notification to citizens of the results of the inspections. Sections 842.13–842.16 contain rules pertaining to the right of entry of Federal inspectors onto the mine property, informal review by the Regional Director of any alleged inadequate or incomplete Federal inspections and the availability to the public of records or information obtained by the office.

Part 843 relates to Federal enforcement in the permanent program pursuant to Federal programs, the Federal lands program and all State programs being enforced by the Office pursuant to Sections 504(b) or 521(b) of the Act. The regulations in this Part address the specifics of cessation orders, notices of violation, suspension and revocation of permits, service of notices and orders and informal mine site review of notices and orders which require cessation of mining. Additionally, Sections 843.18–843.20 deal with the effect of an operator's inability to comply on the validity of notices of violation, cessation orders and show cause orders; those instances when the Secretary may request the Attorney General to institute civil actions against operators; and the rules relating to the institution of criminal proceedings under the Act.

Part 845 contains regulations regarding the assessment of civil penalties under Section 518 of the Act.

PART 840—INSPECTION AND ENFORCEMENT BY THE STATE REGULATORY AUTHORITY

Section 840.11(a) relates to the minimum frequency of inspections by the State regulatory authority based upon the requirements of Section 517(c) of the Act. This section also sets forth definitions for complete and partial inspections by the State regulatory authority.

Section 840.11(c) outlines minimal requirements for inspections in conformity with Section 517 of the Act. Specifically, Section 840.11(c)(1) requires State inspections to be carried out on an irregular basis, so as to monitor compliance at all operations, including those which operate nights, weekends, or holidays. The purpose for this requirement is to insure that operations which conduct mining operations at non-typical times or hours, such as weekends, holidays or nights will be subjected to routine inspections by State inspection personnel. In other words, States must adjust their inspection schedules to match the production of the regulated operations.

Numerous comments were received regarding the draft language. This language has been changed to reflect the above statement.

Section 840.13 states what must be contained in the penalty and enforcement provisions of State programs and cooperative programs. These requirements are taken from the Act, including Sections 518(i), 503(a) and 521(d), as well as from the legislative history. Many of the requirements made upon the States in Part 840 as to civil and criminal penalties, suspension and revocation of permits, injunctive relief and the forfeiture of bonds are general in nature, echoing the actual language contained in the Act. For example, Section 840.13(a) requires that State and cooperative programs contain civil and criminal penalties which are "no less stringent than those set forth in Section 518 of the Act and in Section 843.20 and Part 845 of this chapter."

An alternative approach which was considered by the Office was to make very specific requirements upon the States as to the content of their enforcement programs. Such an approach would give the States and the

public a clearer idea of what will be required in the State enforcement programs. On the other hand, some flexibility may be sacrificed in proceding in this manner. The Office is still considering such an approach and solicits public comment both on the feasibility of this detailed approach and on specific requirements which are recommended for inclusion.

One suggestion which was received was to require the states to allow citizens to accompany state inspectors in the permanent regulatory program. The Office believes that persons who have filed a complaint that leads to an inspection must be allowed to accompany State inspectors under an approved State program and that the right is covered by the general requirements of Section 732.15. The Office solicits comments on whether the regulations should contain more specific statements of this right either in Parts 731, 732 or 840.

Section 840.14 details the requirements for State regulatory authorities to make available to the Office and to the public various records and information. These requirements are based upon provisions contained in Section 517 of the Act. One alternative to Section 840.14(a) which was considered was to require each State regulatory authority to routinely forward to the Office copies of all documents relating to applications for and approvals of existing, new or revised permits and all documents relating to inspection and enforcement actions. The Office considered it more workable and less time-consuming and costly for the States to forward only the material which is requested by the Director or Regional Director. This would allow the individual regions of the Office to determine the specific needs of each region vis-a-vis the State regulatory authorities.

PART 842—FEDERAL INSPECTIONS

Sections 842.11(a) and (b) list the instances in which Federal inspections are to occur in the permanent regulatory program. One of the questions in drafting these provisions was whether Congress intended to waive the 10-day notice requirements where there is adequate proof of either imminent danger or significant, imminent environmental harm (not "imminent danger of significant environmental harm" as stated in Section 521(a)(1) of the Act). Pages 35–36 of Senate Report 95–128 (May 10, 1977) contain the text of Section 421(a)(1) which uses the phrase imminent danger or significant environmental harm. The House Bill, H.R. 2, did not provide for waiver of the 10-day notice to the State regulatory authority. Since no subsequent changes in this language were made, it seems clear that the use of the word "of" instead of "or" can be fairly characterized as a typographical or printing error. Other congressional references to the need of the Secretary to protect against imminent dangers to the public to prevent the occurrence of such disasters as the Buffalo Creek flood disaster lend credence to such an interpretation.

Section 842.11(b)(1)(ii) provides that the Office must inspect when it has notified a State of a possible violation but the State has failed to inform the Office within 10 days that appropriate action has been taken. Under the proposed regulation, if the person supplying the information provides adequate proof that an imminent danger to the public or significant, imminent environmental harm exists and the State has failed to Act, the 10-day notification period is waived. This is based upon Section 521(a)(1) of the Act. It was pointed out that the proposed regulation does not contain the requirement of Section 521(a)(1) that the federal inspection be conducted immediately. This change was made so as to comport with the statute.

Additionally, language was offered by a commenter to state that the "adequate proof" required by Section 521(a)(1) for a federal inspection is the same proof required for a citizen to initiate a federal inspection in the interim program (30 C.F.R. Section 721.13(a)(1)). The suggested language is not required to obtain the desired results since language is already contained in this Section which describes when "adequate proof" is established.

Section 842.11(c) reflects the statutory mandate in Section 517(c) for a minimum frequency of Federal inspections under a Federal program of one partial inspection per month and one complete inspection per calendar quarter.

Section 842.11(d) contains general provisions as to the timing and spacing of Federal inspections. Numerous comments were received objecting to the wording of the draft proposed regulation that inspections be carried out on an irregular basis, including "a reasonable number of inspections on weekends and holidays and at unusual hours." The commenters complained that most operations occur during normal daytime hours and on normal work days and that no purpose would be served in inspecting premises at which no mining was occurring.

Some modification in the language of the proposed regulation was made and the Office will continue to consider the proper wording of this section. The intent of the proposed regulation is to provide for inspections at irregular times and dates so that there will be no advance notice as to when inspections will occur. Many operations work multiple shifts and illegal or "wildcat" non-permitted operators frequently work on nights and weekends to avoid detection. It will be impossible to stop violations from occurring at these operations if inspections are limited to Monday through Friday, 9 to 5.

It is intended that inspections will occur at reasonable hours and times and will merely match the particular operation schedule of the mine in question. The proposed regulation merely affords inspectors the necessary flexibility to inspect in those instances when operations or violations occur at unusual times and/or dates.

Section 842.12 governs those occurrences which will necessitate a Federal inspection as a result of a citizen complaint pursuant to Section 842.11(b)(1). These requirements are based upon the language contained in Sections 517 and 521 of the Act as well as the legislative history of the Act. Consideration was given to requiring all citizen complaints to be initiated by written statements. However, the convenience of the public and the necessity for prompt action in the case of imminent hazards seem to justify the use of oral reports followed by signed written statements.

The comment was made that an oral complaint followed by a written one was in violation of Section 517(b)(1) of the Act if a federal inspection can occur before the written report is received. The Office believes that inspections can occur under those circumstances. It is believed that as long as the inspector receiving the oral complaint requests full information so he can properly evaluate the complaint, the inspection can begin while the written report is on its way. Since a mine is subject to inspection at any time, no prejudice can result if complete information is first obtained in oral form. The necessity to proceed promptly is particularly acute where imminent hazards and rapidly deteriorating conditions are present and can be quickly addressed and remedied.

The requirement contained in Section 842.12(c) that the identity of persons supplying information to the Office shall remain confidential with the Office, if requested, is based upon a belief that some citizens will be reluctant to come forward if they are concerned about harassment, blacklisting or physical abuse. Additional language was inserted, however, to state that disclosure would not be made unless required under the Freedom of Information Act or by other Federal law. The provision regarding confidentiality of persons supplying information to OSM was criticized as not exempting those persons electing to accompany the federal inspector during an inspection. It was reasoned that a person "waives his priviledge of

confidentiality once he enters the mine property." The Office believes that it is reasonable for a mine operator to know who is coming on his property and that it cannot reasonably honor a request for anonymity if the person accompanies the inspector onto another's property. However, the Office solicits further comment as to whether a change in the proposed langauage is appropriate and in accord with the rights of citizens as stated in the Act.

Subsections 842.12 (d) and (e) describe what rights the Office must accord to a complainant if a Federal inspection is conducted as a result of the information provided.

Section 842.13 relates to the right of entry of authorized representatives of the Secretary onto the minesite to conduct inspections pursuant to Section 842.11. Consideration was given to obtaining search warrants for each inspection to be conducted pursuant to Section 842.11. However, this alternative was not proposed because the Office believes it might significantly impair effective enforcement under the Act and because it was deemed legally unnecessary to obtain search warrants prior to entering minesites.

The language of the inspection provisions and pertinent legislative history demonstrate that Congress intended to authorize the Secretary to exercise broad powers to enter minesites to inspect expeditiously and without advance notice. This was deemed essential by Congress to obtain adequate compliance with the Act. Further, the coal industry is a pervasively-regulated industry and, consequently, has impliedly consented to warrantless searches. Also, the areas and equipment to be inspected are located in open areas and are routinely occupied and used by various persons and, therefore, no significant privacy interest is adversely affected by warrantless inspections. Moreover, the United States District Court for the District of Columbia ruled on August 24, 1978, that warrantless inspections may be conducted in the permitted area. However, the reference in the preproposed draft regulation to warrantless inspections of premises in which records are located was deleted.

A change to the language contained in Section 842.13(b) regarding the right of entry to have access to and copy records required under the Act was proposed to add the concept of "relevant records, directly relating to surface coal mining operations." The commenter expressed concern that certain proprietary data, such as geologic information or coal sales contracts might otherwise be subject to inspection. This recommended change is not believed necessary to protect the information about which the commenters were concerned. The only records which may be inspected are those "required under the Act, this Chapter, the applicable program or any permit condition imposed under such program." As such, no idle search or review of records could occur unless specifically authorized by law.

Several commenters stated their belief that Section 517(b)(3) requires inspectors to present their credentials before commencing their inspections, regardless of whether an employee of the operator is present or whether any person requests to see the credentials. If Section 517(b)(3) were so interpreted, it would seriously undermine and impede OSM's ability to enforce the law in that it would enable an operator to prevent an inspection by removing his men from the site while serious environmental or other harm might be occurring. An operator might also delay an inspector long enough to cover up or cease illegal practices, thus avoiding detection. Certain violations are difficult to prove unless they are observed in the commission.

One commenter contends that "for safety and liability reasons," inspectors should be required to present their credentials before commencing inspections. The presentation of credentials would have a minimal effect, if any, on safety and liability. We interpret Section 517(b)(3) as meaning that the operator who encounters the inspector on the permit area is entitled to expect the inspector to present appropriate credentials if requested to do so.

The proposed regulations also provide for informal review by the Regional Director of an alleged inadequate or incomplete Federal inspection or of a decision not to inspect or enforce. The statutory basis for these provisions is found in Section 517(h) of the Act and is discussed in the legislative history.

Comment was received on Section 842.14 relating to adequate and complete inspection review. It was pointed out that Section 517(h)(2) of the Act, upon which this section is based, requires not only Office response to citizen complaints about inadequate or incomplete inspections, but also procedures for adequate and complete inspections whether or not a citizen complains. In other words, there should be management review procedure to assess the adequacy and completeness of inspection. OSM believes that such a review procedure would be in keeping with the wording of Section 517(h)(2) and solicits additional comments on criteria for determining what constitutes an adequate and complete inspection and on language for the regulations to reflect this statutory obligation.

The proposed regulations also provide in Section 842.16 for the availability to the public of all records, reports, inspection materials or other information obtained by the Office. This Section is in accord with the requirements of Section 517(f) of the Act. It is the Office's belief that this section does not prevent the Office from withholding material generated by the preparation of hearings and other special enforcement activity, except as available under discovery and the Freedom of Information Act.

A commenter suggested that this section could be deleted in its entirety without the loss of any person's rights since Section 517 of the Act and the Freedom of Information Act guarantee these rights in any event. Retention of this section was deemed essential to spell out the location and manner of storage of information as well as a statement of what information will not be available. See Section 842.12(b). Additionally, this section will act as guidance to states as far as adoption of similar regulations governing availability of records.

PART 843—FEDERAL ENFORCEMENT

Section 843.11 relates to the circumstances in which cessation orders are to be issued and the requirements of such orders. This section is based upon the wording of Section 521(a)(2), (a)(3), and (a)(5) of the Act and the legislative history relating to cessation orders.

Changes were suggested as to Subsection 843.11(a) and (b) relative to the issuance of cessation orders under Sections 521(a)(2) and (a)(3) of the Act. The commenter suggested that references to ceasing the entire operation, to abating in the most expeditious manner possible and to the use of affirmative obligations be deleted from this section.

The deletion of these provisions is rejected since the proposed language in each instance is taken from the Act. Subsections 521(a)(2) and (a)(3) of the Act provide for cessation of surface coal mining and reclamation operations or any portion thereof. These subsections also require the use of affirmative obligations where cessation of mining will not competely abate the imminent hazard. Section 521(a)(3) of the Act requires abatement in the most expeditious manner possible.

This commenter also requested the deletion of subsection 843.11(c)(2) which requires use of remedial action in orders of cessation issued under Sections 521(a)(2) and 521(a)(3) of the Act. This comment is rejected since such a requirement is contained in Section 521(a)(5) of the Act.

It was also suggested that the word "may" be changed to "shall" in Sec-

tion 843.11(e) as regards extending the time for abatement if the failure to abate within the time previously set was not caused by the operator's lack of diligence. This comment was not accepted since Section 521(a)(3) of the Act does not require an extension of time to abate a notice of violation in all cases where some minimal amount of diligence is shown. Where diligence and good faith are demonstrated, the Office expects that extensions of time generally will be appropriate.

Subsection 843.11(f) was recommended for change by adding the word "immediately" before the words "terminate a cessation order" under the theory that an inspector should be available immediately upon abatement of a condition, practice or violation. While it is expected that federal inspectors will terminate cessation orders as quickly as possible following abatement, consideration of when the Office is notified that abatement is completed, the driving distance and conditions on the way to the mine site and other variables including whether the order has the effect of cessation of mining must be taken into account. For instance, if the cessation order affects only a small portion of the operation which does not cease actual production of coal, there may be no practical necessity to terminate the order instantaneously upon its abatement. It should be emphasized that the Office expects reinspections and terminations, if appropriate, to take place as quickly as possible so as to minimize adverse impact on the operator after compliance.

One commenter states that in deciding on the affirmative obligation to be imposed in an order, the inspector should be required to take into consideration the costs involved. There is no authority for this in the Act. However, an inspector acting reasonably would not knowingly require an operator to use a more expensive means of abatement if a less expensive method could accomplish the same regulatory result in the same time. If the operator knows of such a method, he should inform the inspector and ask him to modify his order. If the inspector agrees with the operator he should modify his order. However, the affirmative obligation should be aimed at assuring that abatement will be accomplished as promptly as possible because of the imminent danger or harm. If the inspector thinks the method suggested by the operator, though less expensive, will take a longer time to abate the violation, he would be perfectly justified in not modifying the order.

A new Subsection 843.12(b) was suggested which would require tolling of the time for abatement of a violation when an event outside the control of the permittee occurs—such as labor disputes, unavailability of equipment and acts of God. It was argued that the 90-day limit on abatement will create unnecessarily harsh results.

An authorized representative of the Secretary may extend the time for abatement up to 90 days, in situations where failure to abate was not due to an operator's lack of diligence. The Act and legislative history make clear, however, that no extension beyond 90 days may occur. This is not to say, however, that the Secretary cannot take the facts of the case into account when calculating a civil penalty since the statutory criteria of negligence and good faith presumably would be relevant.

Section 843.12 contains provisions pertaining to notices of violation authorized under Section 521(a)(3) of the Act. It is noteworthy that the proposed regulation only allows a Federal inspector to issue a notice of violation as part of the enforcement of a Federal program, Federal lands program or during enforcement of a State program pursuant to Sections 504(b) or 521(b) of the Act. Subsection (d) provides that a violation (which is not an imminent hazard) which is observed during a Federal inspection in connection with evaluation of a State program under Section 842.11(a)(1) or conducted pursuant to Section 842.11(b)(1), should be reported in writing to the State regulatory authority and the person responsible for the violation but that no notice of violation may be issued. An alternative approach which was considered was to provide that a Federal inspector could simply issue a notice of violation to the operator under these circumstances. Comment is invited as to whether the proposal language is a correct interpretation of the Act and the legislative history.

Objection was made to the use of interim steps for abatement in notices of violation. Sections 521(a)(3) (a) (5) provide that notices and orders should set forth with reasonable specificity any remedial action to be taken and a reasonable time period for abatement. This language, especially when read in conjunction with the purposes of the Act, is ample to authorize the use of interim steps and interim times for abatement. The reason why the Act provides not only for penalties, but also, for abatement, is to ensure that the violation will be corrected, and in the shortest reasonable time. By specifying interim steps and times for parts of the remedial action, the inspector furthers the objective of gaining abatement in the shortest reasonable time. Normally, interim steps would not be used for cases in which the abatement period was short.

One commenter objected to the interim steps provision because it is unnecessary considering that it had instructed all of its employees to comply with the law and that every responsible operator does the same. Unfortunately such instructions, though to be greatly encouraged, are not always carried out by an operator's employees. Also, this disregards the many operators who do not wish to comply with the law.

The proposed regulations also specify the conditions under which an order to show cause shall issue regarding the suspension and revocation of permits. Consideration was given to a regulatory scheme which would tie the issuance of show cause orders to those instances when an operator exceeded a national or regional norm. Such a scheme is suggested in the legislative history. This approach was not adopted in the draft proposed regulations because it was considered potentially unwieldy and unworkable. Comments are invited, however, as to the national or regional norm approach or to other methods of establishing a pattern of violations which would result in suspension or revocation of a permit.

The proposed language would call for the discretionary issuance of show cause orders by the Director based on certain criteria enumerated in Section 843.13(a)(2). Comments are requested as to these or other possible criteria to guide the Director in the issuance of discretionary show cause orders. In addition, mandatory show cause orders are specified after a certain number of violations in a given period of time. These specific times were proposed based upon some predictions as to the number and frequency of violations which are expected in the permanent regulatory period. Other numbers may be applicable and comments are invited in this regard.

Subsection 843.13(a)(2) was criticized because the commenter believed that a pattern of violations should not hinge on the number of federal inspections within a 12-month period. This comment would be more valuable, however, if some other criteria for establishing a "pattern" of violations were suggested. The Office believes that what constitutes a pattern is still an open question and will examine other suggestions which develop during formal rulemaking.

Additionally, the Office was urged to reconsider its entire approach to suspension and revocation of permits. Again, absent any specific recommendations, it is difficult to evaluate a comment of this type.

Another commenter expressed fears that the Office will apply the pattern of violations provisions as the Mining Enforcement and Safety Administra-

tion (MESA) did under 1969 Coal Mine Health and Safety Act. This comment is inappropriate because Section 521(a)(4) of the Surface Mining Act bears no similarity to any enforcement provision of the 1969 Health and Safety Act. While the term "unwarrantable" appeared in Section 104(c) of the 1969 Act, it was not used in the context of a pattern-of-violations concept or the suspension or revocation of permits. "Unwarranted failure" under Section 521(a)(4) of the Surface Mining Act is defined in Section 701(29) of that Act and will be utilized by the Office in accordance with that definition.

One commenter suggest that "pattern of violation" should be defined as a reliable sample of traits, acts or other observable features characterizing an individual's behavior. The comment is rejected as unnecessary because the definition given in the regulations is adequate and will in fact result in a "reliable sample."

A commenter expressed the hope that inspectors will not abuse their discretion in determining unwarranted failure and suggested that unwarranted failure should be found only where there is substantial negligence on behalf of the company and not when the violation was caused by an individual employee acting contrary to the law or company direction. Regarding substantial negligence, the position argued by the commenter is contrary to the definition of unwarranted failure contained in Section 701(29) of the Act. With regard to the case of an individual acting contrary to the Act, if the position argued were adopted, it would never be possible for a corporation to be found to have violated the Act, because a corporation is an artificial entity which can act only through the acts of its employees and agents.

Section 843.14 relates to requirements regarding the service of notices of violation and cessation orders issued by Federal inspectors. The word "citation" was deleted as being confusing since the 1977 Mine Safety and Health Amendments Act uses the term in a different context.

It was recommended that Section 843.14(a)(2)(i) be amended to clarify that service of notices and orders may only be accomplished by mail if service cannot be made at the mine site. The language of this Section has been modified, however, to make clear that as an alternative to service at the minesite, service may be made by certified mail and that refusal to accept the mail would not defeat service.

Section 845.15 relates to the informal review by the Office of notices and orders which require cessation of mining as specified in Section 521(a)(5) of the Act. As proposed, the regulation would only require informal review to be conducted if the operator requests such a hearing is requested.

The proposed regulations contained in Section 843.15 relate to the hearing within 30 days of receipt of the notice or order. The proposed language states that the hearing will be deemed to be waived unless a request is received in that period. Additionally, the time for hearing will be extended if the request is not received within 21 days of the notification. The Office considered the alternative of conducting such a hearing in every instance regardless of an operator's interest in such a hearing. This alternative was not proposed, however, because experience to date indicates that such a procedure results in an unreasonable waste of manpower. The Office has scheduled numerous minesite review hearings at which no one showed up.

The proposed regulations specify the non-adjudicatory nature of these public hearings and that they are not governed by the Administrative Procedures Act. This is based upon a reading of Section 525 and the language contained in the legislative history of the Act. It is emphasized that this in no way interferes with a party's right to formal review under Section 525(a)(1) of the Act. Moreover, the United States District Court for the District of Columbia in the *Surface Mining Regulation Litigation* held on August 24, 1978, that the Act and the legislative history support the Secretary's interpretation that Section 521(a)(5) of the Act only requires an informal hearing to be conducted.

The draft proposed regulations state in Section 843.18 that inability to comply may not serve as a defense to various enforcement actions but may be used in mitigation of the amount of a civil penalty or in reducing the duration of the suspension of a permit.

Section 843.18 was criticized as being an arbitiary and capricious construction of Section 521(a)(3) of the Act. The commenter raised the same or similar objections to this section as were raised to Section 843.12(b), namely, that the coal industry had historically been exposed to labor disputes, unavailability of equipment and adverse weather conditions. The drafters believe, however, that such occurrences, as well as others, should not necessarily bar enforcement actions for failure to comply with the law. There is authority in the Act and the legislative history to support the view that Congress believed that the only alternative that operators have is to comply or not conduct operations. This interpretation was upheld by the United States District Court for the District of Columbia on August 24, 1978. However, as previously mentioned, unforeseen circumstances can be weighed and considered when the assessment of a civil penalty occurs. These can also be taken into account in extending previously-issued abatement times so long as these do not exceed 90 days.

PART 845—CIVIL PENALTIES

The basic structure of the civil penalty assessment program is a point system which takes into account the four statutory criteria contained in Section 518: History of previous violations at the particular mine; seriousness; negligence; and demonstrated good faith in achieving rapid abatement after notification of the violation.

Various alternatives were considered by the Office for determining *whether* to assess a penalty. First, the Office considered using one specific criterion such as seriousness or negligence for the determination of whether to assess a penalty. Another alternative which the Office explored was judging each violation on a case-by-case basis without specific criteria. These two alternatives were not adopted in the proposed regulations in favor of using the point system both as the determination of *whether* to assess and as to the amount of the assessment. This proposed system contains a threshold number of points above which penalties must be assessed. The Office believes that this system provides a reasonable degree of specificity without eliminating the required flexibility to adjust when appropriate. The Office solicits comments regarding the proposed system or any other assessment system deemed suitable.

The point system contained in the regulations is similar to the system used for years by MSHA and its predecessor, MESA. The main difference between OSM's system and MSHA's system is that the OSM system uses only four criteria compared with MSHA's six, and the values assigned to points are higher under the OSM system than under the MSHA system. So far as can be determined, this system has worked reasonably well in the past.

The Assessment Office is currently making assessments under the point system contained in the interim regulations, which is similar to that proposed for the permanent regulations. While we find the permanent system to be straight-forward and not "mind-boggling" as alleged, we will be looking critically at the operation of the interim system to see if improvements can be made. If future commenters could be more specific about what features of the point system are found difficult to understand or objectionable, OSM would be better able to evaluate them.

The amounts of penalties are to be determined by the same point system. An alternative method which was considered is the setting of proposed civil penalty amounts by the same inspectors who issue the notices and orders. The Office retained the concept of a point system from the initial regulations because it believed that such a system maximizes both consistency and rationality of assessments, given the requirement of Section 518 that the four statutory criteria be considered on each assessment.

The proposed regulations provide for a permissive assessment for each day from the date of issuance of a notice or order to the date set for abatement. In determining whether to make such an assessment, the factors in Section 845.13 are to be considered.

Subsections 845.12(b) and (c) were criticized for several reasons. First, the commenter stated that no threshold cut-off point on mandatory assessment of notices of violation should be established until after OSM has gained a violation and assessment history. Secondly, the commenter felt that if a threshold number must be established, beyond which a penalty shall be established, then a notice of violation with points totalling less than that threshold number should not be assessed in any event.

The drafters believe that sufficient knowledge has been gained in the initial regulatory period to establish a meaningful cut-off level for assessment of notices of violation. Additionally, the Office is contemplating the use of specific criteria for when to assess a penalty when a notice of violation totals less than 30 points. Comments are requested as to whether such criteria would be appropriate and as to what the criteria should be.

One commenter requested that with regard to Section 845.13(b)(1), no history of previous violations should be compiled as to notices of violations which are not assessed. This comment is rejected as being inconsistent with the meaning of history of previous violations. The decision as to whether to assess a penalty is not based on a decision that the violation never occurred or that the notice was erroneously issued but rather that the criteria points were under 30. Therefore, all violations which were validly issued should be counted for purposes of an operator's past history.

A suggestion was made to either delete the final sentence in Section 845.16(a) or to provide that the Director shall not waive the civil penalty formula to either increase or reduce the proposed penalty on the basis of an argument that an increase or reduction could be used to abate violations of the Act. As proposed, the proviso prohibits a reduction only. This comment is not adopted because the purpose of the proviso is to assure that penalties are not lowered on the basis of an economic argument that a lower penalty would result in more money being available to accomplish abatement of violations in the future. Thus, it would be incongruous to insert the word "increase" in the last sentence of Section 845.16(a).

The *procedures* for assessment of civil penalties and the procedure for assessment conference are set out in Sections 845.17 and 845.18 respectively. With regard to the procedure for the assessment conferences, no provision is made for a tolling of the time within which to request a formal hearing. Therefore, the proposed rules require one to pay the amount of the proposed assessment into escrow within 30 days of receipt of the assessment *regardless* of whether one is participating in a conference. Comment is requested as to the proposed conference and hearing procedure.

SUBCHAPTER M—CERTIFICATION AND TRAINING OF BLASTERS AND BLASTER LEARNERS

PART 850—REQUIREMENTS FOR BLASTER CERTIFICATION PROGRAMS

Subchapter M sets out the program requirements and criteria to be followed by the Office and the State regulatory authorities, for the training, examination and certification of persons engaging in or directly responsible for blasting or the use of explosives in surface coal mining operations. The goal of this subchapter is to ensure that blasting operations are conducted by well-trained and competent persons in order to comply with Sections 515 and 719 of the Act. States' training, examination and certification plans must comply with the requirements of this Subchapter and must:

(1) Incorporate an OSM-approved program of instruction in the use of explosives;

(2) Provide for administration of the Office's qualifying examination;

(3) Allow for certification of eligible applicants and for the collection and maintenance of data upon which applicants' certification eligibility has been determined;

(4) Include provisions for the retraining, re-examination and recertification of blasters, and

(5) Specify the conditions under which certified blasters must work, must retain or forfeit their certification, and can appeal a decision to suspend or revoke their certification.

The following sections of the Act relate to Subchapter M: 201, 501, 507, 515 and 719.

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6. Title 25 Rules and Regulations, Commonwealth of Pennsylvania, Department of Environmental Resources—Subpart D, Article IV, Chapter 210 Use of Explosives.

7. Chapter 19, Article 4 of the Administrative Code relating to transportation, sale, storage and use of explosives in connection with blasting operation, the Fire Department, City of New York.

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The regulations in this Part reflect the basic intent of Section 719 of the Act which requires the establishment of training programs and examination and certification procedures for persons engaged in or directly responsible for blasting or the use of explosives in surface coal mining operations. The requirements for a national standard examination in the regulations was used to simplify the certification procedure and create a uniform blaster certification training and examination program nationwide.

These regulations are based on the conclusion that State regulatory agencies, rather than the Office, should perform the training, examination and certification of blasters. This position was taken because the Office believes this approach is more in keeping with the basic finding of the Congress that primary responsibility for regulation of surface mining and reclamation operations should rest with the States. The rationale for this conclusion is that:

(1) The location of the regulatory agencies in local communities throughout the mining regions will make training much more accessible to persons seeking blaster certification; and

(2) Several States already have training programs currently underway which will require in most instances only small modifications in order to be in compliance with the regulations.

With regard to training, the concept followed in developing these regulations is that the Office will approve the course material. However, the training could be conducted by industry, Federal agencies or State regulatory agencies. The certification examination will be given by the State regulatory authority using a standard test developed by the Office.

Authority to require States to implement a training, examination and certification program is contained in Sections 507, 515 and 719 of the Act.

Responsibility for establishing a national examination has been placed with the Director of the Office. This requirement, which is included in the Act, was placed in the regulations in order to create a more uniform testing program nationwide and to ensure that the test fully meets the proposed uniform guidelines on employee selection procedures (F.R. 65542-65552; December 30, 1977). Once developed and validated, the test could immediately be given to the States for administering to all existing blasters. This would greatly expedite the certification process.

The responsibility for reviewing, approving and monitoring State plans for the certification and training of blasters was placed with the Regional Director in order to assure that State plans are comprehensive, and that the States are following their State plans and these regulations.

The regulations specify that States must submit to the Office, by February 3, 1979, plans for training and certification programs. This was done because Section 719 of the Act did not set out a specific time schedule for these regulations. Therefore, the Office made a decision to incorporate this program within the overall State program submission. By doing it this way, the States can use grant money to assist them in establishing the program. States must ensure that all blasters are certified as of August 3, 1979 and that all provisions in the State plan are implemented. Once a State or Federal program has gone into effect, all persons engaged in blasting operations must be certified.

The Office recognizes that there are numerous factors which contribute to and affect the performance and proficiency of persons using explosives for blasting purposes in surface coal mine operations. As a result of requiring the use of experts as instructors and a course containing specified technical content, the Office believes that blasters will better understand the hazards involved in the use of explosives and that persons using explosives will be encouraged to take appropriate steps to ensure the safety of life and property. Course content reflects the minimum basic requirements for understanding the chemical and physical properties of explosives, and the proper selection, use, and maintenance of explosive material. Such content determination was made on the basis of experience of persons familiar with blasting operations and after consulting the technical references.

These regulations recognize that the States, in most instances, will be the regulatory authorities and therefore provide for the States to conduct the training or allow industry to conduct the training subject to State approval.

Section 805.12 establishes the minimum requirements relating to the use of explosives that will be addressed in the examination for the certification of blasters. Content of the examination, which will be performance-oriented, is based on the content of the training. Questions will be designed to measure the skills and knowledge to be acquired during training. Use of a performance test avoids problems resulting from varying degrees of literacy and unfamiliarity with the English language.

There are also provisions in these regulations for an employee to become a "blaster learner." These provisions were included in the regulations both for the benefit of the employer and the employees. They allow employees an opportunity to learn the trade before having to take the certification examination, and provide the employer some flexibility in building up the blasting components of his organization.

PART 851—MINIMUM REQUIREMENTS FOR CERTIFICATION OF BLASTERS

It is the intent of the regulations in this part to provide individual blasters or prospective blasters with the necessary information regarding requirements that they have to meet in order to become certified, to provide a basic description of the terms and conditions of certification, and the requirements for recertification, to delineate the constraints placed on blasters, and to provide for an appeal procedure.

This section delineates the various steps an individual must go through to become certified. Paramount in the process is the passing of the certification examination. All blasters must pass the examination before they can be certified. There will be no exemption based on previous certification. Experienced blasters need not take the training prior to the examination; however, they are required to present a notarized statement from their employer or other responsible persons attesting to the fact that the applicant is experienced in blasting. Even if a person has experience in blasting, he may elect to take the OSM-approved training prior to applying for the certification examination. In addition to meeting the training and examination requirements of these regulations, each applicant for certification must show proof that they have completed the Health and Safety Training as required by the Mine Health and Safety Administration. This provision is in keeping with the provisions of Public Law 95-164, November 9, 1977, which require each operator of a coal mine to have a health and safety training program approved by the Secretary of Labor. The effective date for certification of blasters is planned to coincide with the dates mandated by the Act for State program submissions and approvals.

This section of the regulations sets the term of certification and the conditions under which the certification will be issued. It also explains the circumstances under which a blaster's certification might be suspended or revoked.

These provisions are included in the regulations to ensure that blasters will keep abreast of the state of the art in the area of blasting and that the regulatory authority will have an opportunity to provide information to blasters with respect to the impact of this program on the public and to provide current information to blasters concerning possible changes in OSM programs generally. The three-year recertification requirement can be met by simply taking the eight-hour refresher course which will include the type of information mentioned above. There will be no mandatory test requirement for the first three-year period of a blaster's certification. However, at the end of each six-year period of a blaster's certification, the blaster must take the standard examination again. The Office believes this is necessary in order to assure that blasters are keeping up with the state of the art in blasting and the changes in Federal and State requirements. The Office believes that this is the only way to confirm this.

These provisions were included in the regulations to assure that blasters understand the importance placed upon the certification requirement, and to discourage them from abusing the certification privileges. They also provide some flexibility in utilizing the assistance of the "blaster learners" who might be assigned to them. However, the use of "blaster learners" is in no way intended to abrogate the responsibility of the certified blasters.

The intent of this provision is to provide an opportunity for a person whose certification has been suspend-

ed or revoked to appeal the decision and receive an expeditious hearing. This procedure will ensure that a person has the opportunity to refute any evidence upon which an adverse decision has been based.

REGULATION DRAFTERS

The proposed permanent program regulations have been drafted by a large professional staff in the Office of Surface Mining and on detail from other Federal agencies. Preparation of the regulations has been under the responsibility of Paul Reeves, Acting Deputy Director. Assistant Directors in OSM have been responsible for the preparation and content of particular subchapters:

Dave Maneval, Assistant Director, Technical Services and Research—subchapter A—Part 707, and subchapters G, J, K, and M.
Carl Close, Acting Assistant Director, State and Federal Programs—subchapters C, D, and F.
Dick Hall, Assistant Director, Inspection and Enforcement—subchapter L.
Paul Reeves, Acting Deputy Director—subchapter A.

Attorneys in the Division of Surface Mining, Office of the Solicitor, have participated in the review and drafting of the proposed rules under the supervision of William M. Eichbaum, Associate Solicitor and Peter B. Kelsey, Assistant Solicitor for Regulatory Programs.

Dated: September 12, 1978.

JOAN M. DAVENPORT,
Assistant Secretary,
Energy and Minerals.

In consideration of the foregoing it is proposed to:

(1) Recodify 30 CFR, Chapter VII into Subchapters as follows:

(a) Subchapter A—General, containing existing Parts 700, 701, 705, 706, and 707,

(b) Subchapter B—Initial Program Regulations, containing existing Parts 710, 715, 716, 717, 718, 720, 721, 722, 723, 725,

(c) Subchapter C—Permanent Regulatory Programs in States,

(d) Subchapter D—Regulatory Program for Federal Lands,

(e) Subchapter F—Areas Unsuitable for Mining,

(f) Subchapter G—Permits for Surface Coal Mining Operations,

(g) Subchapter J—Performance Bonds for Surface Coal Mining Operations,

(h) Subchapter K—Permanent Program Environmental Performance Standards,

(i) Subchapter L—Permanent Program Inspection and Enforcement Procedures,

(j) Subchapter M—Certification and Training of Blasters,

(k) Subchapter P—Protection of Employees,

(l) Subchapter R—Abandoned Mine Land Reclamation, and

(m) Subchapter S—Mining and Mineral Research Institutes.

(2) Redesignate:

(a) 30 CFR, Chapter VII, Part 830 as Subchapter P, Part 865,

(b) 30 CFR, Chapter VII, Part 837 as Part 870 within Subchapter R,

(c) 30 CFR, Chapter VII, Part 740 as Part 735 within Subchapter C,

(3) Revise 30 CFR Part 700 to read as stated below, and

(4) Amend 30 CFR, Chapter VII to add:

(i) Subchapter A, Parts 701 and 707;
(ii) Subchapter C, Parts 730, 731, 732, 733, and 736;
(iii) Subchapter D, Parts 740, 741, 742, 743, 744, and 745;
(iv) Subchapter F, Parts 760, 761, 762, 764, 765, and 769;
(v) Subchapter G, Parts 770, 771, 776, 778, 779, 780, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, and 792;
(vi) Subchapter J, Parts 800, 805, 806, 807, 808, and 809;
(vii) Subchapter K, Parts 810, 811, 812, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, and 828;
(viii) Subchapter L, Parts 840, 842, 843, and 845; and
(ix) Subchapter M, Parts 850 and 851.

SUBCHAPTER A—GENERAL

PART 700—GENERAL

Sec.
700.1 Scope.
700.2 Objective.
700.3 Authority.
700.4 Responsibility.
700.5 Definitions.
700.11 Applicability.
700.12 Petitions to initiate rulemaking.
700.13 Notice of citizen suits.
700.14 Availability of records.
700.15 Computation of time.

AUTHORITY: Sections 102, 201, 501(b), 517, 520, 701, Pub. L. 95-87, 91 Stat. 448, 449, 468, 498, 503, 516 (30 U.S.C. 1202, 1211, 1251, 1267, 1270, 1291).

§ 700.1 Scope.

The following regulations in Chapter VII of 30 CFR, consisting of Parts 700-899, establish the procedures through which the Secretary of the Interior will implement the Surface Mining Control and Reclamation Act of 1977 (Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. section 1201 *et. seq.*)). *Chapter VII is divided into 13 Subchapters.*

(a) Subchapter A contains introductory information intended to serve as a guide to the rest of the Chapter and to the regulatory requirements and definitions generally applicable to all programs and persons covered by the Act.

(b) Subchapter B contains regulations covering the interim regulatory program which apply, prior to the applicability of permanent program regulations, to surface coal mining and reclamation operations and persons.

(c) Subchapter C sets forth regulations covering applications for and decisions on permanent State programs, the process to be followed for substituting a Federal program for an approved State program if necessary, the process for assuming temporary Federal enforcement of an approved State program, and the process for implementation of a Federal program in a State when called for by the Act.

(d) Subchapter D identifies the procedures that apply to surface coal mining and reclamation operations conducted on Federal lands rather than State or private lands and incorporates the performance standards in Subchapter K.

(e) (1) Subchapter F implements the requirements of the Act for—

(i) Designating lands which are unsuitable for all or certain types of surface coal mining operations;

(ii) Terminating designations no longer found to be appropriate; and

(iii) Those lands or areas where the Act states that surface coal mining operations should not be permitted or should be permitted only after specified determinations are made.

(2) This Subchapter does not include regulations governing designation of areas unsuitable for non-coal mining under the terms of section 601 of the Act or the designation of Federal lands under the Federal lands review provisions of subsection 522(b). The Bureau of Land Management is responsible for these regulations, which will be found in Title 43 of the Code of Federal Regulations.

(f) Subchapter G governs applications for and decisions on permits for surface coal mining and reclamation operations on non-Indian and non-Federal lands under a State or Federal program. It also governs coal exploration notification and approval requirements. Additional permit application requirements and decision criteria for special categories of mining are also in this Subchapter. Regulations implementing the experimental practices provision of the Act are also included in Subchapter G.

(g) Subchapter J sets forth requirements for performance bonds and public liability insurance for both surface mining and underground mining activities on non-Federal lands.

(h) Subchapter K sets forth the environmental and other performance standards which apply to coal exploration and to surface coal mining and reclamation operations during the permanent regulatory program. The regulations establish the minimum requirements for operations under State and Federal programs. Performance standards applicable to special mining situations such as anthracite mines, mining in Alaska, alluvial valley floors and prime farmlands are covered.

(i) Subchapter L sets forth the inspection, enforcement, and civil penalty provisions that apply to a State, Federal, or Federal lands program.

(j) Subchapter M sets forth the requirements for the training, examination, and certification of blasters.

(k) Subchapter P sets forth the provisions for protection of employees who initiate proceedings under the Act or testify in any proceedings resulting from the administration or enforcement of the Act.

(l) Subchapter R sets forth the regulations for the abandoned mine land reclamation program. These regulations include the fee collection requirements and the mechanisms for implementing the State and Federal portions of the abandoned mine land reclamation program.

(m) Subchapter S sets forth the regulations that apply to grants for mining and mineral research institutes and grants for mineral research projects.

§ 700.2 Objective.

The objective of Chapter VII is to fulfill the purposes of the Act found in section 102 in a manner which is consistent with the language of the Act, its legislative history, other applicable laws, and judicial interpretations.

§ 700.3 Authority.

The Secretary is authorized to administer each program required by the Act, except for the following requirements:

(a) Provisions of the Act that authorize the Secretary of Agriculture to establish programs for the reclamation of rural lands, identification of prime agricultural lands, and other responsibilities described in the Act. Regulations promulgated by the Secretary of Agriculture are in Title 7 of the Code of Federal Regulations;

(b) Provisions of the Act for which responsibility is specifically assigned to other Federal agencies, including the Department of Labor, the Environmental Protection Agency, the Corps of Engineers, the Council on Environmental Quality and the Department of Energy; and

(c) Authority retained by the States to enforce State law or regulations which are not inconsistent with the Act and regulations in this Chapter, including the authority to enforce more stringent land use and environmental controls and regulations.

§ 700.4 Responsibility.

(a) The Director of the Office of Surface Mining Reclamation and Enforcement, under the general direction of the Assistant Secretary, Energy and Minerals, is responsible for exercising the authority of the Secretary, except for the following:

(1) Approval or disapproval of an initial State program. This exception does not include amendments, modification, withdrawals or suspensions in whole or in part of State programs;

(2) Designation of lands as unsuitable for all or certain types of surface coal mining operations under section 522 of the Act and as unsuitable for non-coal mining under section 601 of the Act.

(b) The Director is responsible for consulting with Federal land-managing agencies and Federal agencies with responsibility for natural resources on Federal lands on actions which may have an effect on their responsibilities.

(c) The States are responsible for the regulation of surface coal mining and reclamation operations under a State program and the reclamation of abandoned mine lands under an approved State Reclamation Plan on non-Federal and non-Indian lands in accordance with procedures in this Chapter.

(d) The Secretary may delegate to a State through a cooperative agreement certain authority relating to the regulation of coal mining on Federal lands.

§ 700.5 Definitions.

As used throughout the regulations of this Chapter, except where otherwise indicated—

Act means the Surface Mining Control and Reclamation Act of 1977 (Pub. L. 95-87).

Coal means combustible carbonaceous rock, classified as anthracite, bituminous, subbituminous, or lignite by A.S.T.M. designation 0-388-66.

Department means the United States Department of the Interior.

Director means the Director, Office of Surface Mining Reclamation and Enforcement, or his representative.

Federal lands means any land, including mineral interests, owned by the United States without regard to how the United States acquired ownership of the lands and without regard to the agency having responsibility for management thereof, except Indian lands: *provided that* for the purposes of the Act, lands or mineral interests east of the one hundredth meridian west longitude owned by the United States and entrusted to or managed by the Tennessee Valley Authority are not subject to sections 714 (Surface owner protection) and 715 (Federal lessee protection) of the Act.

Federal lands program means a program established by the Secretary pursuant to section 523 of the Act to regulate surface coal mining and reclamation operations on Federal lands.

Fund means the Abandoned Mine Reclamation Fund established pursuant to section 401 of the Act.

Indian lands means all lands, including mineral interests and rights-of-way, within the exterior boundaries of any Federal Indian reservation, notwithstanding the issuance of any patent, and all lands, including mineral interests, held in trust for or supervised by an Indian tribe.

Indian tribe means any Indian tribe, band, group or community having a governing body recognized by the Secretary.

Office means the Office of Surface Mining Reclamation and Enforcement established under Title II of the Act.

Regional Director means the Regional Director of the Office or his representative.

Person means an individual, Indian tribe when conducting surface coal mining and reclamation operations on non-Indian lands, partnership, association, society, joint venture, joint stock company, firm, company, corporation, or other business organization and, for purposes of regulations implementing Title V of the Act, all governmental entities listed in section 524 of the Act.

Person whose interests are or may be adversely affected or *person with a valid legal interest* shall include any person:

(a) Who uses and enjoys any resource of economic, esthetic, or environmental value that may be affected by surface coal mining and reclamation operations or any related action of the Secretary or the State regulatory authority; or

(b) Whose property is or may be affected by surface coal mining and reclamation operations or any related action of the Secretary or the State regulatory authority.

Public office means a facility under the direction and control of a governmental entity, which is open to public access on a regular basis during reasonable business hours.

Regulatory authority means the department or agency in each State which has primary responsibility at the State level for administering the Act in the initial program, or the State regulatory authority where the State is administering the Act under an approved State program, or the Secretary in the initial or permanent program where the Secretary is administering the Act, or the Secretary when administering the Federal lands program.

Secretary means the Secretary of the Interior or his representative.

State regulatory authority means the department or agency in each State which has primary responsibility at the State level for administering the initial or permanent State program.

Surface coal mining operations means:

(a) Activities conducted on the surface of lands in connection with a surface coal mine or subject to the requirements of section 516 of the Act, surface operations and surface impacts incident to an underground coal mine, the products of which enter commerce or the operations of which directly or indirectly affect interstate commerce. Such activities include excavation for the purpose of obtaining coal, including extraction of coal from coal refuse piles and such common methods as contour, strip, auger, mountaintop removal, box cut, open pit, and area mining, the uses of explosives and blasting, and in situ distillation or retorting, leaching or other chemical or physical processing, and the cleaning, concentrating, or other processing or preparation, loading of coal for interstate commerce at or near the minesite: *provided, however,* that such activities do not include the extraction of coal incidental to the extraction of other minerals where coal does not exceed 16⅔ per centum of the tonnage of minerals removed for purposes of commercial use or sale or coal exploration subject to section 512 of the Act; and

(b) The areas upon which such activities occur or where such activities disturb the natural land surface. Such areas shall also include any adjacent land, the use of which is incidental to any such activities, all lands affected by the construction of new roads or the improvement or use of existing roads to gain access to the site of such activities and for haulage and excavation, workings, impoundments, dams, ventilation shafts, entryways, refuse banks, dumps, stockpiles, overburden piles, spoil banks, culm banks, tailings, holes or depressions, repair areas, storage areas, processing areas, shipping areas and other areas upon which are sited structures, facilities, or other property or material on the surface, resulting from or incident to such activities.

Resulting from or incident to means a relation between two events such that when one event occurs the other event will, in the natural sequence of events, also occur.

Surface coal mining and reclamation operations means surface coal mining operations and all activities necessary or incidental to the reclamation of such operations. This term includes the term "surface coal mining operations."

Ton means 2000 pounds avoirdupois (.90718 metric ton).

§ 700.11 Applicability.

This Chapter applies to all coal exploration and surface coal mining and reclamation operations except—

(a) The extraction of coal by a landowner for his own noncommercial use from land owned or leased by him, *provided that* noncommercial use does not include the extraction of coal by one unit of an integrated company or other business or nonprofit entity which uses the coal in its own manufacturing or power plants;

(b) The extraction of coal for commercial purposes where the surface mining and reclamation operation affects two acres or less. Any person who affects or intends to affect more than two acres by surface coal mining and reclamation operations is not exempt from the requirements of this Chapter;

(c) The extraction of coal as an incidental part of Federal, State or local government-financed highway or other construction under Part 707;

(d) The extraction of coal incidental to the extraction of other minerals where coal does not exceed 16⅔ percent of the mineral tonnage removed for commercial use or sale;

(e) The extraction of coal on Indian lands under 25 CFR 177, Subpart B; and

(f) Coal exploration on Federal lands outside the permit area.

§ 700.12 Petitions to initiate rulemaking.

(a) Any person, State or local government may petition the Director to

initiate a proceeding for the issuance, amendment, or repeal of any regulation issued under the Act. The petition shall be filed in the Office of the Director, Office of Surface Mining Reclamation and Enforcement, United States Department of the Interior, Washington, D.C. 20240.

(b) The petition shall set forth a concise statement of the facts, technical justification, and law which require issuance, amendment, or repeal of a regulation under the Act and shall indicate whether the petitioner desires a public hearing.

(c) Upon receipt of a petition, the Director shall determine if the petition sets forth facts, technical justification and law which may provide a reasonable basis for issuance, amendment or repeal of a regulation. Facts, technical justification or law previously considered in a petition or rulemaking on the same issue shall not be found to provide a reasonable basis. If the Director determines that the petition has a reasonable basis, a notice shall be published in the FEDERAL REGISTER seeking comments from the public on the proposed change. The Director may hold a public hearing and may conduct an investigation or take other action to determine whether the petition should be granted.

(d) Within 90 days from the date of receipt, the Director shall issue a written decision either granting or denying the petition, which shall constitute the final decision for the Department.

(1) If the petition is granted, the Director shall initiate a rulemaking proceeding.

(2) If the petition is denied, the Director shall notify the petitioner in writing, setting forth the reasons for denial.

§ 700.13 Notice of citizen suits.

(a) A person who intends to initiate a civil action on his own behalf under section 520 of the Act shall give notice of intent to do so in accordance with the regulations of this section.

(b) Notice shall be given by certified mail to the Secretary and the Director in all cases and to the head of the State regulatory authority if a complaint involves or relates to a specific State. A copy of the notice shall be sent by first class mail to the Regional Director if the complaint involves or relates to surface coal mining and reclamation operations in a specific region.

(c) Notice shall be given by certified mail to the alleged violator if the complaint alleges a violation of the Act or any regulation, order, or permit issued under the Act.

(d) Service of notice under this section is complete upon mailing to the last known address of the person being notified.

(e) A person giving notice regarding an alleged violation of the Act or any regulation, order, or permit issued under the Act shall state, to the extent known:

(1) Sufficient information to enable the recipient to identify the provision of the Act, regulation, order, or permit allegedly violated;

(2) The act or omission alleged to constitute a violation;

(3) The person or persons responsible for the alleged violation;

(4) The date, time, and location of the alleged violation;

(5) The name, address, and telephone number of the person giving notice; and

(6) The name, address, and telephone number of legal counsel, if any of the person giving notice.

(f) A person giving notice of an alleged failure by the Secretary or a State regulatory authority to perform a mandatory act or duty under the Act shall state, to the extent known:

(1) The provision of the Act containing the mandatory act or duty allegedly not performed;

(2) Sufficient information to enable the recipient to identify the omission alleged to constitute the failure to perform a mandatory act or duty under the Act;

(3) The name, address, and telephone number of the person giving notice; and

(4) The name, address, and telephone number of legal counsel, if any, of the person giving notice.

§ 700.14 Availability of records.

(a) Records required by the Act to be made available locally to the public shall be retained at the geographically closest office of the appropriate State or Federal regulatory authority having jurisdiction over the area involved.

(b) Other records or documents in the possession of the Office or other Federal agencies may be requested under 43 CFR Part 2, which implements the Freedom of Information Act and the Privacy Act.

§ 700.15 Computation of time.

(a) Except as otherwise provided, computation of time under this Chapter is based on calendar days.

(b) In computing any period of prescribed time, the day on which the designated period of time begins is not included. The last day of the period is included unless it is a Saturday, Sunday, or legal holiday on which the regulatory authority is not open for business, in which event the period runs until the end of the next day which is not a Saturday, Sunday, or legal holiday.

(c) Intermediate Saturdays, Sundays, and legal holidays are excluded from the computation when the period of prescribed time is seven days or less.

PART 701—PERMANENT REGULATORY PROGRAM

Sec.
701.1 Scope.
701.2 Objective.
701.3 Authority.
701.4 Responsibility.
701.5 Definitions.
701.11 Applicability.

AUTHORITY: sections 201, 501, 701, Pub. L. 95-87, 91 Stat. 449, 467, 516 (30 U.S.C. 1211, 1251, 1291).

§ 701.1 Scope.

(a) This Part provides general introductory material for the permanent regulatory program required by the Act.

(b) The following regulations apply to the permanent regulatory program:

(1) Subchapter C on State program application, approval, withdrawal, grants and Federal program implementation;

(2) Subchapter D on surface coal mining and reclamation operations on Federal lands;

(3) Subchapter F on criteria for designating lands unsuitable for surface coal mining operations and the process for designating these lands or withdrawing the designation by the regulatory authority;

(4) Subchapter G on the process for application, approval, denial, revision, and renewal of permits for surface coal mining and reclamation operations, requirements for special categories of these operations, and requirements for coal exploration;

(5) Subchapter J on public liability insurance and performance bonds or other assurances of performance for surface coal mining and reclamation operations;

(6) Subchapter K on performance standards which apply to coal exploration operations, surface coal mining and reclamation operations, and special categories of these operations;

(7) Subchapter L on inspection and enforcement responsibilities and civil penalties; and

(8) Subchapter M on criteria for training, examination, and certification of blasters.

§ 701.2 Objective.

The regulations in this Part give the reader—

(a) A general overview of the regulatory program to be implemented by the State or Federal regulatory authority;

(b) The applicability of that program to coal exploration operations and surface coal mining and reclamation operations; and

(c) The definitions that apply to those operations.

§ 701.3 Authority.

(a) The Secretary is required by section 501(b) of the Act to promulgate regulations which establish the permanent regulatory program created by the Act. The Secretary delegates this rulemaking authority to the Director.

§ 701.4 Responsibility.

(a) A State regulatory authority may assume primary responsibility for regulation of coal exploration and surface coal mining and reclamation operations during the permanent regulatory program upon submission and approval of a State program meeting all applicable requirements of the Act and the regulations of Chapter VII of this Title. After approval of the State program, the State regulatory authority has responsibility for review of and decisions on permits for surface coal mining and reclamation operations, approval of coal exploration which removes from the earth more than 250 tons of coal, inspection of surface coal mining and reclamation operations and coal exploration operations for compliance with the performance standards and enforcement of the State program.

(b) While a State regulatory program is in effect, the Office's responsibility includes, but is not limited to—

(1) Evaluating the administration of the State program through such means as periodic inspections of coal exploration operations and surface coal mining and reclamation operations in the State and review of permits, inspection reports and other reports required to be made available to the Office;

(2) Referring to the State regulatory authority information creating a reasonable belief that any person is in violation of the Act, regulations, or any permit condition or coal exploration approval condition, and initiating an inspection when called for by the Act; and

(3) Issuing cessation orders when a condition, practice or violation exists which creates an imminent danger to the health or safety of the public, or is causing or could reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources.

(c) The Office shall implement a Federal program in a State if that State does not have an approved State program by June 3, 1980. The Office shall not implement a Federal program in a State for a period of one year if the State's failure to have an approved program by June 3, 1980, is due to an injunction imposed by a court of competent jurisdiction.

(d) Under a Federal program, the Office is the regulatory authority for all coal exploration and surface coal mining and reclamation operations in that State and performs the functions that a State regulatory authority would perform under an approved State program.

(e) During the period in which a State program is in effect, the Office shall take over responsibility for enforcing permit conditions and issuing new or revised permits and shall issue necessary notices and orders, when required by regulations in Part 733.

(f) The Office shall substitute a Federal program for an approved State program when required by the regulations in Part 733.

§ 701.5 Definitions.

As used in the regulation of coal exploration and surface coal mining and reclamation operations under a State program, Federal program or Federal lands program, the following terms have the specified meanings, unless otherwise indicated.

Acid drainage means water with a pH of less than 6.0 discharged from active or abandoned mines and from areas affected by coal mining operations.

Acid-forming materials means earth materials that contain sulfide minerals or other materials which, if exposed to air, water, or weathering processes, will cause acids that may create acid drainage.

Adjacent area means, for the purpose of permit application, renewal, revision, review and approval, those natural and human resources contiguous to or near a mine plan area which may be impacted by surface coal mining and reclamation operations conducted within a permit area during the life of a mine. "Adjacent area" means, for the purpose of conducting surface coal mining and reclamation operations, those natural and human resources contiguous to or near the affected area which may be impacted by surface coal mining and reclamation operations conducted within a permit area during the life of a mine.

Affected area means, when used in the context of surface mining activities, all natural and human resources within the permit area which are disturbed or utilized during the term of the permit in the course of surface mining activities. When used in the context of underground mining activities, "affected area" means natural and human resources affected during the term of the permit (a) by surface operations or facilities incident to underground mining activities or (b) by underground operations.

Agricultural activities means, with respect to alluvial valley floors, the use of any tract of land for the production of animal or vegetable life where the use is enhanced or facilitated by sub-irrigation or flood irrigation associated with alluvial valley floors. These uses include, but are not limited to, pasturing, grazing, and watering of livestock, and the cropping, cultivation, or harvesting of plants whose production is enhanced or facilitated by the availability of water from subirrigation or flood irrigation, but do not include agricultural practices which do not derive benefit from the availability of water from sub-irrigation or flood irrigation.

Agricultural use means the use of any tract of land for the production of animal or vegetable life. The uses include, but are not limited to, pasturing, grazing, and watering of livestock and the cropping, cultivation or harvesting of plants.

Alluvial valley floors means the unconsolidated stream-laid deposits holding streams where water availability is sufficient for sub-irrigation or flood irrigation agricultural activities but does not include upland areas which are generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from sheet erosion, deposits formed by unconcentrated runoff or slope wash, together with talus, other mass movement accumulation and wind-blown deposits.

Anthracite means coal as listed in D-388 (reapproved 1972), Part 26, 1976 Annual Book of ASTM Standards.

Applicant means any person, company, corporation or other legal entity seeking a permit from a regulatory authority to conduct surface coal mining activities or underground mining activities pursuant to a State program, a Federal program or a Federal lands program.

Approximate original contour means that surface configuration achieved by backfilling and grading of the mined areas so that the reclaimed area, including any terracing or access roads, closely resembles the general surface configuration of the land prior to mining and blends into and complements the drainage pattern of the surrounding terrain, with all highwalls, spoil piles and coal refuse piles eliminated. Water impoundments may be permitted where the regulatory authority determines that they are in compliance with 30 CFR 816.49.

Aquifer means a zone, stratum, or group of strata that can store and transmit water in sufficient quantities for a specific use.

Arid and semiarid area means, for the purpose of alluvial valley floors, an area of the interior western United States, west of the one hundredth meridian west longitude, experiencing water deficits, where water use by native vegetation equals or exceeds that supplied by precipitation. All coal

fields located in North Dakota west of the one hundredth meridian west longitude, all coal fields in Montana, Wyoming, Utah, Colorado, New Mexico, Idaho, Nevada, and Arizona, the Eagle Ross field in Texas, and the Stone Canyon and the Ione fields in California are in arid and semiarid areas.

Auger mining means a method of mining coal at a cliff or highwall by drilling holes laterally into an exposed coal seam from the highwall and transporting the coal along an auger bit to the surface.

Best technology currently available means equipment, devices, systems, methods, or techniques which will (a) prevent, to the extent possible, additional contributions of suspended solids to stream flow or runoff outside the permit area, but in no event shall such technology result in contributions of suspended solids in excess of requirements set by applicable State or Federal laws; and (b) minimize, to the extent possible, disturbances and adverse impacts of the operation on fish, wildlife and related environmental values, and achieve enhancement of such resources where practicable. "Best technology currently available" shall include equipment, devices, methods, or techniques which are currently available anywhere even if such equipment, devices, methods, or techniques are not in routine use. "Best technology currently available" shall include, but not be limited to, sedimentation ponds designed in accordance with Parts 816 and 817 of this Chapter. Within the constraints of the interim and permanent program regulations, the regulatory authority shall have the discretion to determine the best technology currently available on a case-by-case basis.

Coal exploration means the gathering of surface or subsurface geologic, physical, or chemical data by mapping, trenching, drilling, geophysical or other techniques necessary to determine the quality and quantity of overburden and coal of an area and the gathering of environmental data to establish the conditions of the area beginning before surface coal mining and reclamation operations under the requirements of this Subchapter.

Coal processing plant means a collection of facilities where run-of-the-mine coal is prepared for market by chemical or physical processing, separated from its impurities, and loaded for shipment. The processing plant may consist of, but not be limited to, the following support facilities: storage and stockpile facilities; sheds, shops and other buildings; water treatment and water storage facilities; settling basins and impoundments; coal processing and other waste disposal areas; roads, railroads and other transport facilities; and utilities.

Coal processing waste means earth materials which are combustible, physically unstable, or acid-forming or toxic-forming, wasted or otherwise separated from product coal, and slurried or otherwise transported from processing facilities or preparation plants after physical or chemical processing, cleaning, or concentrating of coal.

Combustible material means organic material that is capable of burning either by fire or through oxidation accompanied by the evolution of heat and a significant temperature rise.

Compaction means to increase the density of a material by the reduction of void spaces between the particles generally accomplished by controlled placement and mechanical effort such as repeated application of wheel or roller loads from heavy equipment.

Cultivated crops means those crops that are planted and usually tilled, including small grains, nurseries, orchards, soil crops and other specialty crops, except that cultivated crops shall not include rangeland.

Disturbed area means an area where vegetation, topsoil, or overburden has been removed by surface coal mining operations and until reclamation of those areas is complete and the bond released.

Diversion means a channel, embankment, or other manmade structure constructed for the purpose of diverting water from one area to another. See also "permanent diversion" and "temporary diversion."

Downslope means the land surface between a valley floor and the projected outcrop of the lowest coalbed being mined along each highwall.

Embankment means an artificial deposit of material that is raised above the natural surface of the land and used to contain, divert, or store water, support roads or railways, or other similar purposes.

Ephemeral stream means a stream or the headwater part of a stream that flows for less than 30 consecutive days, which flows only in direct response to precipitation in the immediate watershed, and which has a channel bottom that is always above the local water table.

Essential hydrologic functions means, with respect to alluvial valley floors, the role of the valley floor in collecting, storing, regulating, and making usefully available the natural flow of surface water or ground water or both, for agricultural activities, by reason of its position in the landscape and the physical properties of its underlying materials. Some combination of these functions provides a water supply during extended periods of low precipitation. The role of collecting water includes accumulating runoff and discharge from aquifers such that the amount of water available at the alluvial valley floor is greater than the amount available from direct precipitation. The role of storing water involves limiting the rate of discharge of surface water, holding moisture in soils, and holding ground water in porous materials. The role of regulating the natural flow of surface water results from the characteristic configuration of the channel and the flood plain and adjacent low terraces, and the role of regulating the natural flow of ground water results from the properties of aquifers which control inflow and outflow. The role of making water usefully available for agricultural activities results from the existence of flood plains and terraces where surface and ground water can be provided in sufficient quantities to support the growth of agriculturally useful plants, from the presence of earth materials suitable for the growth of agriculturally useful plants, from the temporal and physical distribution of water rendering it accessible to plants throughout the critical phases of the growth cycle either by flood irrigation or by subirrigation, from the natural control of alluvial valley floors in limiting destructive extremes of stream discharge, and from the erosional stability of earth materials suitable for the growth of agriculturally useful plants. The hydrologic and geologic characteristics that support these essential hydrologic functions are discussed in section 785.19.

Federal program means a program established by the Secretary pursuant to section 504 of the Act to regulate surface coal mining and reclamation operations on lands within a State in accordance with the requirements of the Act.

(a) *Complete Federal program* means a program established by the Director, pursuant to section 504 of the Act prior to June 3, 1980, or upon the complete withdrawal of a State program after June 3, 1980, by which the Director regulates all coal exploration and surface coal mining and reclamation operations on non-Federal and non-Indian lands within a State, in accordance with the Act and this Chapter.

(b) *Partial Federal program* means a program established by the Director pursuant to sections 102, 201 and 504 of the Act upon the partial withdrawal of a State program by which the Director may regulate appropriate portions of coal exploration and surface coal mining and reclamation operations on non-Federal and non-Indian lands within a State, in accordance with the Act and this Chapter.

Flood irrigation means, with respect to alluvial valley floors, supplying water to plants by natural overflow or the diversion of flows, in which the ir-

rigated surface is largely covered by a sheet of water.

Ground water means sub-surface water that fills available openings in rock or soil materials such that they may be considered water-saturated.

Half-shrub means a perennial plant with a woody base whose annually produced stems die back each year.

Head-of-hollow fill means a fill structure consisting of any materials other than waste placed in the uppermost reaches of a watershed so as to encroach upon or obstruct to any degree any natural stream channel, other than fills on high land areas with slopes of less than 20 degrees where surface drainage is conducted in minor channels such as rills and gullies which contain flow only in direct response to precipitation events and which rills and gullies are the only form of stream channels throughout the entire fill area. The top surface of the fill, when completed, will be at approximately the same elevation as the adjacent ridge line and no significant area of natural drainage will occur above the fill draining into the fill area.

Highwall means the face of exposed overburden and coal in an open cut of a surface or for entry to an underground coal mine.

Historically used for the production of cultivated crops means lands that have been used for the purpose of cultivated crops for any five years or more out of the 20 years immediately preceding the date of a permit application filed under Subchapter G or Subchapter D of this Chapter.

Hydrologic balance means the relationship between the quality and quantity of inflow to, outflow from, and storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake, or reservoir. It encompasses the quantity and quality relationships between precipitation, runoff, evaporation, and the change in ground and surface water storage.

Hydrologic regime means the entire state of water movement in a given area. It is a function of the climate, and includes the phenomena by which water first occurs as atmospheric water vapor, passes into a liquid or solid form and falls as precipitation, moves along or into the ground surface, and returns to the atmosphere as vapor by means of evaporation and transpiration.

Imminent danger to the health and safety to the public means the existence of any condition or practice, or any violation of a permit or other requirements of the Act in a surface coal mining and reclamation operation, which condition, practice, or violation could reasonably be expected to cause substantial physical harm to persons outside the permit area before such condition, practice, or violation can be abated. A reasonable expectation of death or serious injury before abatement exists if a rational person, subjected to the same condition or practice giving rise to the peril, would not expose himself or herself to the danger during the time necessary for abatement.

Impoundment means a closed basin, naturally formed or artificially built, which is dammed or excavated for the retention of water, sediment, or waste.

In situ processes means activities conducted on the surface or underground in connection with in-place distillation, retorting, leaching, or other chemical or physical processing of coal, to include, but not be limited to, in situ gasification, in situ leaching, slurry mining, solution mining, bore hole mining and fluid recovery mining.

Intermittent or perennial stream means a stream or part of a stream that flows continuously during all (perennial) or for at least one month (intermittent) of the calendar year as a result of ground-water discharge or surface runoff. The term does not include an "ephemeral stream."

Land use categories means specific uses or management-related activities, rather than the vegetation or cover of the land. Land uses may be identified in combination when joint or seasonal uses occur. When combined uses are designated, one land use shall be identified as primary and one or more others designated as secondary land uses. For purposes of alternative post-mining land uses, land uses shall include only the following categories as defined below:

(a) *Cropland.* Land used primarily for the production of cultivated and close-grown crops for harvest, alone or in association with sod crops. Land used for facilities in support of cropland farming operations is included.

(b) *Hayland or pasture.* Land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or cut and cured for livestock feed.

(c) *Grazingland.* Includes both grass lands and forest lands where the indigenous vegetation is actively managed for grazing, browsing or hay production. Land used for facilities in support of ranching operations is included.

(d) *Forestry.* Land used or managed for the long-term production of wood, wood fiber or wood derivative products. Land used for facilities in support of forest harvest and management is included.

(e) *Residential.* Includes single and multiple family housing, mobile home parks, hotels, motels and other residential lodgings. Support facilities include, but are not limited to, vehicle parking and open space that directly relate to the residential use.

(f) *Manufacturing.* Includes all heavy and light industrial uses such as textile, lumber and wood processing, chemical manufacture, petroleum refining, and fabricated metal products manufacture.

(g) *Transportation, communication, and utilities.* Includes all rail, aircraft, marine, and automobile transportation facilities (e.g., railroad tracks, highways, airports), and communications and utilities facilities and supporting rights-of-way.

(h) *Trade.* All wholesale and retail trade, including warehouses, stores, restaurants, and other commercial establishments.

(i) *Services.* Includes all financial, personal, repair, and professional services, and educational, religious, and governmental service facilities.

(j) *Recreation.* Land used for public or private leisure-time recreational use. Includes developed recreation facilities such as parks, camps, and amusements, as well as less intensive uses such as hiking, canoeing, and other undeveloped recreational uses.

(k) *Fish and wildlife management.* Land used for production, protection, and population control (i.e., fishing and hunting) of game species of fish and wildlife.

(l) *Mining and extraction.* Includes all metal ore, coal, crude petroleum, and natural gas mining and extraction and the quarrying of non-metallic minerals. Also includes facilities specifically related to the mining and extraction of these materials.

(m) *Developed water resources.* Includes land used for storing water for beneficial uses such as stockponds, irrigation, fire protection, flood control, or water supply.

(n) *Natural areas.* Land used to protect and maintain specific features or species or to maintain ecological diversity in identified fragile areas. Includes areas designated as sanctuaries or under special management which limits or excludes access (e.g., areas under specific protection as threatened or endangered species habitats).

(o) *Undeveloped land or no current use or land management.* Includes land areas that are undeveloped or if previously developed, not presently used or managed, such as cropland that is no longer in production and is currently idle land.

Macro-invertebrate biological community means an assemblage of 2 or more species of arthropod or molluscan animals adapted to flowing waters for all or part of their life cycles, the life cycles of which are dependent upon a flowing water habitat, and which are reproducing or can reasonably be expected to reproduce in the water body where they are found. The

mature animals must be longer than 2 millimeters at some stage of the part of their life cycle spent in flowing water habitat.

Materially damage water quality or quantity means with respect to alluvial valley floors, changes in the quality or quantity of surface or ground water which provide some or all of the water that subirrigates or is or may be used for flood irrigation in an alluvial valley floor located in or adjacent to a surface coal mining and reclamation operation.

Mine plan area means those areas, including all natural and human resources, which would be within the cumulative areas permitted during the estimated life of the mine. Other terms defined in this section which relate closely to "mine plan area" include the "permit area," which will always be within or the same as the mine plan area; the "affected area," which will always be within or the same as the permit area; and the "adjacent area," which may surround or extend beyond the "mine plan area," "permit area," or "affected area."

Noxious plants means species that have been included on official State lists of noxious plants for the State in which the surface coal mining and reclamation operation occurs.

Operator means any person engaged in coal mining who removes or intends to remove more than 250 tons of coal from the earth or coal refuse piles by mining within 12 consecutive calendar months in any one location.

Outslope means the exposed area sloping away from a bench or terrace being constructed as a part of a surface coal mining and reclamation operation.

Overburden means material of any nature, consolidated or unconsolidated, that overlies a coal deposit, excluding topsoil.

Perennial stream—See intermittent or perennial stream.

Performance bond means the indemnity instrument in a sum certain, supported by a surety's guarantee, pledge of collateral or other acceptable contractual guarantee, by which the permit applicant assures faithful performance of all the requirements of the Act, the regulations of this Chapter, or a State or Federal program, the rules and regulations promulgated thereunder and the provisions of its permit.

Permanent diversion means a diversion remaining after mining and reclamation which is approved for retention by the regulatory authority and other appropriate State and Federal agencies.

Permit means a permit to conduct surface coal mining and reclamation operations issued by the State regulatory authority pursuant to a State program or by the Secretary pursuant to a Federal program. For purposes of the Federal lands program, permit means the document issued for surface coal mining and reclamation operations on Federal lands after approval of a mining plan by the Director and, where a cooperative agreement pursuant to section 523 of the act has been executed, the State regulatory authority.

Permit area means the area, including all natural and human resources, included within the boundaries specified in a permit, whether or not the areas will be impacted by surface coal mining and reclamation operations, which are designated on the approved maps submitted by the applicant with his permit application and covered by the performance bond required by Subchapter J.

Permittee means a person holding a "permit" to conduct surface coal mining and reclamation operations issued by a State regulatory authority pursuant to a State program or by the Director pursuant to a Federal program or the Secretary pursuant to a Federal lands program.

Precipitation event means a quantity of water resulting from precipitation in a limited period of time. It may be expressed in terms of recurrence intervals, that is the frequency of recurrence of such events within specific probability limits (usually 97% probability that a greater event will not occur). As used in these regulations, "precipitation event" also includes water released at the same rate and volume from snowmelt.

Prime farmlands means lands that have been historically used for the production of cultivated crops and are defined as prime farmland by the Secretary of Agriculture in 7 CFR part 657.

Productivity means the vegetative yield produced by a unit area for a unit of time.

Rangeland means, for purposes of prime farmlands, land on which the natural potential (climax) plant cover is composed principally of native grasses, forbs, and shrubs valuable for forage. This land includes natural grasslands and savannahs, such as prairies, and juniper savannahs as brush lands. Except for brush control, management is primarily achieved by regulating the intensity of grazing and season of use.

Recharge capacity means the ability of the soils and underlying materials to allow precipitation and runoff to infiltrate and reach the zone of saturation.

Reclamation means all actions necessary to comply with the requirements of the Act and regulations in Subchapter K of this Chapter.

Recurrence interval means the interval of time in which a precipitation event is expected to occur once, on the average. For example, the 10-year 24-hour precipitation event would be that 24-hour precipitation event expected to occur on the average once in 10 years. The magnitude of such events is as defined by the Department of Commerce, National Oceanographic and Atmospheric Administration, in Technical Paper No. 40, National Weather Service Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, and subsequent amendments or equivalent regional or rainfall probability information developed therefrom. DOC-NOAA Technical Paper No. 40, mentioned in the previous sentence, is hereby incorporated by reference. This work is incorporated as it exists on the date of adoption of this Part, and notices of changes made in these materials will periodically be published in the Federal Register. DOC-NOAA Technical Paper No. 40 is available for inspection at the Office in the Department of the Interior, 18th and C Streets NW., Washington, D.C. 20240.

Reference areas means land units of varying size and shape identified and maintained under appropriate management for the purpose of measuring ground cover, productivity and species diversity that are produced naturally. Reference areas must be representative of geology, soils, slope, aspect and vegetation in the permit area.

Roads means all roads, including access and haul roads, constructed, used, reconstructed, improved, or maintained for use in coal exploration or surface coal mining and reclamation operations, including use by coal-hauling vehicles leading to transfer, processing, or storage areas. The term includes any such road used and not graded to approximate original contour within 45 days of construction, other than temporary roads used for topsoil removal and coal haulage roads within the pit area. Roads maintained with public funds such as all Federal, State, county, or local roads are excluded.

Runoff means precipitation that flows overland before entering a defined stream channel and becoming streamflow.

Safety factor means the ratio of the available shear strength to the developed shear stress or the ratio of the sum of the resisting forces to the sum of loading or driving forces, as determined by accepted engineering practices.

Sedimentation pond means any natural or artifical structure or depression used to remove sediment from water and store sediment or other debris.

Significant, imminent environmental harm to land, air or water resources is determined as follows:

(a) An environmental harm is any adverse impact on land, air, or water resources, including but not limited to plant and animal life.

(b) An environmental harm is imminent if a condition, practice or violation exists which—

(1) Is causing such harm or

(2) May reasonably be expected to cause such harm at any time before the end of the reasonable abatement time that would be set under section 521(a)(3) of the Act.

(c) An environmental harm is significant if that harm is appreciable and not immediately reparable.

Slope means average inclination of a surface, measured from the horizontal and normally expressed as a unit of vertical distance to a given number of units of horizontal distance (e.g., 1v to 5h=20 percent=11.3 degrees).

Soil horizons means contrasting layers of soil lying one below the other, parallel or nearly parallel to the land surface. Soil horizons are differentiated on the basis of field characteristics and laboratory data. The three major soil horizons are—

(a) *A horizon.* The uppermost layer in the soil profile, often called the surface soil. It is the part of the soil in which organic matter is most abundant, and where leaching of soluble or suspended particles is the greatest.

(b) *B horizon.* The layer immediately beneath the A horizon and often called the subsoil. This middle layer commonly contains more clay, iron, or aluminum than the A or C horizons.

(c) *C horizon.* The deepest layer of the soil profile. It consists of loose material or weathered rock that is relatively unaffected by biologic activity.

Special bituminous coal surface mines means those bituminous coal surface mines in existence on January 1, 1972, or mines adjoining or having a common boundary with those mines for which development began after August 3, 1977, that are located in the State of Wyoming and that are being mined or will be mined according to the following criteria:

(a) Surface mining takes place on a relatively limited site for an extended period of time. The surface opening of the excavation is at least the full size of the excavation and has a continuous border.

(b) Excavation of the mine pit follows a coal seam that inclines 15 degrees or more from the horizontal, and as the excavation proceeds downward it expands laterally to maintain stability of the pitwall or as necessary to accommodate the orderly expansion of the total mining operation.

(c) The amount of material removed from the pit is large in proportion to the surface area disturbed.

(d) There is no practicable alternative to the deep open-pit method of mining the coal.

(e) There is no practicable way to entirely reclaim the land as required in Subchapter K.

Spoil means overburden that has been removed during surface mining.

Stabilize means any method used to control movement of soil, spoil piles, or areas of disturbed earth by modifying the geometry of the mass, modifying physical or chemical properties or otherwise providing a protective surface coating.

State program means a program established by a State and approved by the Secretary pursuant to section 503 of the Act to regulate surface coal mining and reclamation operations on non-Indian and non-Federal lands within such State according to the requirements of the Act and regulations issued by the Secretary under the Act: *Provided that,* If a cooperative agreement under Part 745 has been entered into, a State program may apply to Federal lands in accordance with the terms of the cooperative agreement.

Steep slope means any slope above 20° or such lesser slope as may be designated by the regulatory authority after consideration of soil, climate, and other characteristics of a region or State.

Sub-irrigation means, with respect to alluvial valley floors, the supplying of water to plants from below or the existence of a semi-saturated or saturated sub-surface whose water is available for use by vegetation. Sub-irrigation may be identified by:

(a) Diurnal fluctuation of the water table, due to the difference in night and daytime evapotranspiration rates;

(b) Increasing soil moisture from a portion of the rooting zone down to a saturated zone, due to capillary action;

(c) Mottling of the soils in the root zones;

(d) Existence of an important part of the root zone within the capillary fringe or water table of an alluvial aquifer; or

(e) An increase in stream flow or a rise in ground water level indicating an increase in available water shortly after the first killing frost on the valley floor.

Substantially disturb means, for purposes of coal exploration, to significantly impact upon land, air or water resources by such activities as blasting, mechanical excavation of land, drilling or altering coal or water exploratory holes or wells, construction or creation of roads and other access routes, and the placement of structures, excavated earth or other debris upon the surface of land.

Surface mining activities means those surface coal mining and reclamation operations incident to the extraction of coal from the earth by removing the materials over the coal seam before recovering the coal and the recovery of coal from a deposit that is not in its original geologic location.

Surface water means water, either flowing or standing, on the surface of the earth.

Suspended solids means organic or inorganic materials, carried or held in suspension in water, that will remain on a 0.45 micron filter.

Temporary diversions means those diversions of streams and overland flow used during mining and reclamation and not approved by the regulatory authority to remain after reclamation as part of the approved postmining land use.

Topsoil means the A soil horizon, which is the uppermost layer of the three major soil horizons.

Toxic-forming materials means toxic earth materials or wastes which, if acted upon by air, water, weathering, or microbiological processes, are likely to produce chemical or physical conditions in soils or water that are detrimental to biota or uses of water.

Toxic mine drainage means water that is discharged from active or abandoned mines or other areas affected by coal exploration or coal mining and reclamation operations which contains a substance that through chemical action or physical effects is likely to kill, injure, or impair biota commonly present in the area that might be exposed to it.

Underground development waste means waste rock mixtures of coal, shale, claystone, siltstone, sandstone, limestone, or related materials that are excavated, moved, and disposed during development and preparation of areas incident to underground mining activities.

Underground mining activities means a combination of—

(a) Surface operations such as construction, use, and reclamation of new and existing roads, as defined in this section, above-ground repair areas, storage areas, processing areas, shipping areas, areas upon which are sited support facilities including hoist and ventilating ducts, areas utilized for the disposal and storage of waste, and areas on which materials incident to underground mining operations are placed; and

(b) Underground operations such as underground construction, operation, and reclamation of shafts, adits, underground support facilities, and underground mining, hauling, storage, and blasting.

Undeveloped rangelands means, for purposes of alluvial valley floors, lands

where the use is not specifically controlled and managed.

Unconsolidated stream-laid deposits holding streams means, with regard to alluvial valley floors, all floodplains and terraces, including terraces covered by non-alluvial materials, found in the lower parts of topographic valleys, in which are found perennial streams with stream channels wider than 3 feet in bank-full width or 0.5 foot in bank-full depth, or stream channels shown on a standard USGS 1:24,000 scale topographic quadrangle. In plan view, these terraces, with the active floodplain and channel, form one contiguous unit separated only by minor deposits of non-alluvial materials. Isolated higher terraces, not associated with the valley floor, such as those found along drainage divides, are not included under this definition and are considered upland areas.

Upland areas means, with respect to alluvial valley floors, alluvial fans, pediment surfaces, landslide deposits, and residuum, as well as highland areas, underlain by bedrock, and covered by residual weathered material and debris deposited by sheetwash or rillwash.

Valley fill means a fill-structure consisting of any materials other than waste placed so as to encroach upon or obstruct any natural stream channel, other than fills on highland areas with slopes of less than 20 degrees where surface drainage is conducted in minor channels such as rills and gullies which contain flow only in direct response to precipitation events and which rills and gullies are the only form of stream channels throughout the entire fill area.

Water table means the upper surface of a zone of saturation, where the body of ground water is not confined by an overlying impermeable zone.

§ 701.11 Applicability.

(a) Any person who conducts surface coal mining and reclamation operations on non-Indian and non-Federal lands 8 months after the date upon which a State program is approved or a Federal program is implemented in a State, or who conducts surface coal mining and reclamation operations on Federal lands 8 months after the effective date of Subchapter D of this Chapter, shall have a permit issued pursuant to the State, Federal or Federal lands program. However, if an initial administrative decision has not been made on a permit application timely filed under a State or Federal program or a Federal lands program, and a person has a valid permit issued pursuant to section 502 of the Act during the initial regulatory program or an approved mining plan pursuant to 30 CFR 211, that person may continue surface coal mining and reclamation operations as provided for in Part 771 or 741 under the terms of that permit or mining plan pending an initial administrative decision on the permit application.

(b) The performance standards in Subchapter K of this Chapter shall be effective, according to their terms, for any surface coal mining and reclamation operation required to obtain a permit under the Act on the earliest date upon which the Act and the regulations in this Chapter require that a permit be obtained for such operations.

(c) Any person conducting a coal exploration operation which substantially disturbs the natural land surface, on or after the date on which a State program is approved or a Federal program implemented, shall either file a notice of coal exploration or obtain approval as required by 30 CFR 776.

(d) Coal exploration performance standards in 30 CFR 815 apply in accordance with their terms to coal exploration 2 months after approval of a State program or implementation of a Federal program.

PART 707—EXEMPTION FOR COAL EXTRACTION INCIDENT TO GOVERNMENT FINANCED HIGHWAY OR OTHER CONSTRUCTION

Sec.
707.1 Scope.
707.2 Objective.
707.4 Responsibility.
707.5 Definitions.
707.11 Applicability.
707.12 Government financing agency notification.
707.13 Public notice.
707.14 Conduct of exempt operations.

AUTHORITY: Sec. 102, 201, 501, and 528, Pub. L. 95-87, 91 Stat. 448, 449, 467, and 514 (30 U.S.C. 1202, 1211, 1251, 1278).

§ 707.1 Scope.

This Part establishes the procedures for notifying the regulatory authority of those surface coal mining and reclamation operations which are exempt from the Act and the regulations in this Chapter because the extraction of coal is an incidental part of Federal, State or local government-financed highway or other construction.

§ 707.2 Objective.

(a) The regulations in this Part exempt from the requirements of the Act and the regulations in this Chapter, the extraction of coal which is incidental to government financed construction, provided the coal extraction meets specified criteria intended to ensure that the construction is government financed and that the coal extraction is incidental to it.

(b) Through regulations adopted by the regulatory authority consistent with the Part, coal extraction operations which meet the criteria are exempt from the Act and the regulations in this Chapter.

§ 707.4 Responsibility.

(a) The regulatory authority is responsible for maintaining a public file of all notifications received from a government financing agency of coal extraction which is an incidental part of governmental financed construction.

(b) Persons undertaking extraction of coal which is not exempted from the Act and this Chapter are responsible for obtaining a permit under Subchapter G before beginning the extraction of coal.

(c) Government financing agencies are responsible for notifying the regulatory authority of all coal extraction operations which are an incidental part of government financed construction and including in the notification the information specified in this Part.

(d) Any person carrying on the extraction of coal as an incidental part of government financed construction is responsible for possessing on the site of the coal extraction operation a copy of the notification sent to the regulatory authority by the government financing agency.

§ 707.5 Definitions.

As used in this Part the following terms have the specified meaning unless otherwise indicated:

Extraction of coal, or coal extraction means surface coal mining and reclamation operations, including removal of coal from coal refuse piles.

Extraction of coal as an incidental part means extraction of coal the market value of which is less than 50 percent of the cost of the government-financed construction. For purposes of this definition, only that coal extracted from within the right-of-way, in the case of a road, railroad, utility line or other such construction, or within the boundaries of the area affected by other types of government-financed construction, shall be considered incidental to that construction. Extraction of coal outside the right-of-way or boundary of the affected area of the construction shall be subject to the requirements of the Act and this Chapter.

Construction means activities resulting in a man-made structure or alteration of the landscape, such as earth work, blasting, building, erecting or performing other related work.

Earth work means activities directly affecting the configuration of the land, such as site preparation and clearance, foundation preparation, excavation, grading, reclamation and related work.

Government financing agency means a Federal, State, county, munic-

ipal, or local unit of government, or a department, bureau, agency or office of the unit which directly, or through another unit of government, finances construction.

Government financed construction means construction funded in excess of 50 percent by funds appropriated from a government financing agency's budget or obtained from general revenue bonds, but shall not mean government financing agency guarantees, insurance, loans, funds obtained through industrial revenue bonds or their equivalent, or in kind payments.

§ 707.11 Applicability.

(a) Coal extraction which is an incidental part of government-financed construction is exempt from the Act and the regulations in this Chapter only if—

(1) The market value of the coal extracted is less than 50 percent of the total cost of the construction,

(2) The government financing represents more than 50 percent of the total construction costs, and

(3) The coal extracted is removed from within the right-of-way or boundary of the area directly affected by the construction.

(b) Coal extraction which does not satisfy the criteria in paragraph (a) of this section shall not proceed until a permit has been obtained from the regulatory authority pursuant to Subchapter G of this Chapter.

§ 707.12 Government financing agency notification.

(a) A government financing agency which funds construction where extraction of coal is an incidental part of that government-financed construction, shall notify the regulatory authority in advance of any coal extraction operation. Extraction of coal as an incidental part of the government-financed construction which removes less than 250 tons of coal or affects less than two acres during the course of the operation is exempt from the Act and the regulations in this Chapter and may proceed without regard to this Part.

(b) The notification filed with the regulatory authority shall contain—

(1) A description of the construction project;

(2) The exact location of the construction right-of-way or the boundaries of the area which will be directly affected by the construction;

(3) The kind and amount of the government financing including the percentage of the entire construction costs represented by the government financing;

(4) The market value of the coal to be extracted as an incidental part of the government-financed construction;

(5) The name of the person conducting the government-financed construction and the person's business address or that of his local registered agent; and

(6) A copy of the environmental and public health and safety requirements with which the person will be required to comply.

§ 707.13 Public notice.

The regulatory authority shall maintain a copy of the notification on public file, available during all business hours, at its office geographically closest to the site of the construction.

§ 707.14 Conduct of exempt operations.

Persons conducting extraction of coal as an incidental part of government-financed construction which is exempt from the Act and regulations in this Chapter shall possess a copy of the government financing agency notification at the site of the coal extraction.

SUBCHAPTER C—PERMANENT REGULATORY PROGRAMS IN STATES

PART 730—GENERAL REQUIREMENTS FOR REGULATORY PROGRAMS IN STATES

Sec.
730.1 Scope.
730.2 Objectives.
730.4 Responsibilities.
730.5 Definitions.
730.11 Inconsistent or more stringent State laws and regulations.
730.12 Requirement for regulatory programs in States.

AUTHORITY: Secs. 102, 201(c), 501(b), 503, 504, 505, and 521 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 471, 473, and 504 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1255, 1271).

§ 730.1 Scope.

This Subchapter sets forth standards and procedures for the submission, review, approval or disapproval of State programs, including criteria and procedures for amending approved programs, substituting Federal enforcement for State enforcement of the State program or withdrawing approval for those programs not adequately implemented or maintained. Also included are regulations for State program grants and the adoption of a Federal regulatory program in a State which does not have a State program or which has failed to implement, enforce or maintain its approved program consistent with the regulations of this Subchapter.

§ 730.2 Objectives.

The objectives of this Subchapter include—

(a) Establishing criteria and procedures for a State to follow in preparing and submitting a program or program amendment;

(b) Establishing procedures and criteria for the review and approval or disapproval of program submissions and amendments;

(c) Establishing criteria and procedures for substituting Federal enforcement of a State program and withdrawing approval of State programs;

(d) Establishing a grants program to assist States in developing and administering and enforcing State programs; and

(e) Establishing criteria and procedures for the promulgation, review, implementation, administration, and withdrawal of Federal programs.

§ 730.4 Responsibilities.

(a) Each State that wishes to regulate coal exploration and surface coal mining and reclamation operations within its boundaries on non-Federal and non-Indian lands shall submit to the Director a proposed State program under Part 731 of this Subchapter.

(b) Each State that wishes to receive a program development or an administration and enforcement grant shall submit its request to the Regional Director in whose region the State is located under Part 735 of this Subchapter.

(c) The Regional Director shall also receive and review amendments to an approved State program and shall recommend approval or disapproval of such amendments to the Director.

(d) The Director shall review each proposed State program and shall recommend approval or disapproval of a State program to the Secretary.

(e) The Secretary shall approve or disapprove a proposed State program.

(f) The Director shall approve or disapprove amendments to a State program.

(g) The Director shall also either substitute Federal enforcement for a State program or withdraw approval of a State program that is not properly administered, maintained or enforced.

(h) Each State having an approved State program shall implement, administer and enforce it in accordance with the Act, the provisions of the State program as approved by the Secretary, and consistent with the regulations of this Chapter.

(i) The Director shall promulgate and implement a Federal program under Part 736 of this Subchapter for a State that does not have an approved State program or where he has withdrawn approval of a State program that has not been properly administered, maintained or enforced.

§ 730.5 Definitions.

As used in this Subchapter—

(a) *Consistent with* means that a rule or regulation adopted by the State to carry out the provisions of the Act must be the same as or similar to the regulations promulgated under the Act and must achieve the same regulatory result.

(b) *In accordance with* means that a State law regulating coal exploration and surface coal mining and reclamation operations shall be in agreement with and no less stringent than applicable provisions of the Act.

§ 730.11 Inconsistent or more stringent State laws and regulations.

(a) No State law or regulation shall be superseded by any provision of the Act or the regulations of this Chapter, except to the extent the State law or regulation is less stringent than or precludes implementation of procedures or requirements of the Act or the regulations of this Chapter. The Director shall publish in the FEDERAL REGISTER any State law or regulation which he determines to be inconsistent with the Act or regulations of this Chapter.

(b) Any State law or regulation which provides for more stringent land use and environmental controls and regulations of coal exploration and surface coal mining and reclamation operations than do the provisions of the Act and this Chapter, or which provides for the control and regulation of coal exploration and surface coal mining and reclamation for which no provision is contained in the Act or this Chapter, shall not be construed to be inconsistent with the Act or this Chapter.

§ 730.12 Requirement for regulatory programs in States.

Not later than June 3, 1980, each State in which there are or may be conducted coal exploration and surface coal mining and reclamation operations on non-Federal and non-Indian land shall have in place either a State program or a Federal program adopted under this Subchapter. States in which no coal exploration or surface coal mining and reclamation operations are in existence or planned on June 3, 1980, but in which such operations may occur at some later date, shall have a State or Federal program adopted and in place to regulate those operations prior to the commencement of any such operations.

PART 731—SUBMISSION OF STATE PROGRAMS

Sec.
731.1 Scope.
731.6 Eligibility.
731.12 Submission of State programs.
731.13 Alternative procedures and performance standards.
731.14 Content requirements for program submissions

AUTHORITY: Secs. 102, 201(c), 501(b) and 503(a), Pub. L. 95-87, 91 Stat. 448, 449, 468, 470 (30 U.S.C. 1202, 1211, 1251, 1253).

§ 731.1 Scope.

This Part establishes standards and procedures for the preparation and submission of State programs.

§ 731.11 Eligibility.

Any State in which coal exploration and surface coal mining and reclamation operations are conducted or may be conducted may submit a proposed State program to the Regional Director in whose region the State is located.

§ 731.12 Submission of State program.

(a) Each State that wishes to regulate coal exploration and surface coal mining and reclamation operations within its boundaries on non-Federal and non-Indian lands shall submit 3 copies of a proposed program to the Regional Director for the region in which that State is located on or before February 3, 1979.

(b) If an act of the State legislature is necessary before a State may submit a proposed program which includes the necessary State laws and regulations, the Director may extend the date for the initial submission to August 3, 1979, or any earlier date determined to be appropriate by the Director. States seeking such an extension shall submit a written request, including a justification, to the Director no later than February 3, 1979.

(c) States may also submit a proposed program at any time later than June 3, 1980, when—

(1) Implementation of a Federal program under 30 CFR Part 736 has been completed; or

(2) States without prior surface coal mining under the Act become aware of potential new surface coal mining operations.

(d) The State shall retain sufficient copies of the program for public inspection under 30 CFR 732.12(a).

§ 731.13 Alternative procedures and performance standards.

As part of its program submission, a State may request approval for alternatives to the requirements for permitting, bonding, inspection, enforcement and performance standards established in this Chapter where geologic, topographic, climatic, hydrologic and other regional conditions support alternative approaches. For each requirement for which the State proposes an alternative, the State shall—

(a) Describe the requirement from which the variation is requested and the reason for the request;

(b) Describe the alternative approach recommended and provide statutory or regulatory language to be used to implement the alternative, and

(c) Explain how the alternative approach is consistent with this Chapter, including supporting data which demonstrate that use of the proposed alternative will achieve the same or more stringent regulatory results as required by this Chapter.

§ 731.14 Content requirements for program submissions.

The program shall demonstrate that the State has the capability of carrying out the provisions of the Act and achieving its purposes by providing a complete description of the system for implementing, administering and enforcing a State program including, at a minimum—

(a) A copy of the State laws in effect at the time of submission of the program which regulate coal exploration and surface coal mining and reclamation operations;

(b) A copy of any State regulations promulgated to implement and enforce State laws which regulate coal exploration and surface coal mining and reclamation operations;

(c) Copies of (1) other State laws directly affecting the regulation of coal exploration and surface coal mining and reclamation operations, and (2) amendments to existing laws or regulations regulating coal exploration and surface coal mining and reclamation operations which are being considered or are pending;

(d) A legal opinion from the Attorney General of the State stating that the State has the legal authority to implement, administer and enforce the program and to regulate coal exploration and surface coal mining and reclamation operations in accordance with the Act and consistent with this Chapter. The opinion shall include a section by section comparison of the State's laws and regulations with the Act and this Chapter, explaining any differences and their legal effect;

(e) A copy of the legal document which designates one State agency as the regulatory authority and authorizes that agency to implement, administer and enforce a State program and to submit grant applications, and to receive and administer grants under this Subchapter;

(f) A chart describing the existing and proposed structural organization of the agency designated as the regulatory authority and other agencies or applicable divisions or departments of other agencies which will have a role in the State program and indicating coordination between agencies and lines of authority and staffing functions within each agency and between agencies;

(g) A copy of supporting agreements between agencies which will have a role in the State program;

(h) Narrative descriptions and flow charts, indexed according to sections or subsections of the Act and this Chapter, of the proposed systems and processes for—

(1) Receiving applications for new or revised permits, reviewing, approving or disapproving permits or revisions to permits for surface coal mining and reclamation operations, and numbering permits according to a uniform permit-numbering system adopted by the Office;

(2) Assessment of fees for permit applications, provided that—

(i) Fees shall not exceed the actual or anticipated costs of reviewing permit applications and administration and enforcement of such permits; and

(ii) Fees shall not exceed the average estimated costs of the review, administration and enforcement of the permit.

(3) Posting, release and forfeiture of performance bonds, or other equivalent sureties;

(4) Inspecting and monitoring coal exploration and surface coal mining and reclamation operations, including provisions for public participation in the process;

(5) Enforcing the administrative, civil and criminal sanctions of State laws for violation of any requirement relating to the regulation of coal exploration and surface coal mining and reclamation operations;

(6) Enforcing the permanent performance standards consistent with subchapter K of this Chapter;

(7) Assessing civil penalties;

(8) Issuing public notices and holding public hearings;

(9) Coordinating issuance of permits with other State, Federal and local agencies;

(10) Consulting with State and Federal agencies having responsibility for protection or management of endangered or threatened species, historic, cultural, and other environmental values;

(11) Designating lands unsuitable for surface coal mining operations, including provisions for terminating such designations and for public participation in the designation process;

(12) Monitoring, reviewing and enforcing restrictions against direct and indirect financial interests of State employees;

(13) Training, examination and certification of blasters consistent with Subchapter M of this Chapter;

(14) Regulating coal exploration operations;

(15) Providing for public participation in the development, revision and enforcement of State regulations, the State program and the issuance of permits under the State program; and

(16) Providing administrative review of program enforcement actions.

(i) Statistical information describing coal exploration and surface coal mining and reclamation operations in the State, including--

(1) Tonnage of coal produced annually for each of the most recent three years for both underground and surface coal mining operations, according to type of mining, such as contour, area, or mountaintop, and giving the source of the data;

(2) Number of mines producing coal during each of the most recent three years for both underground and surface coal mining operations according to the type of coal produced, i.e., bituminous, anthracite, or lignite;

(3) Acreage permitted by coal exploration and underground and surface coal mining operations during each of the most recent three years;

(4) A map showing the geographic distribution by county of existing underground and surface coal mining and reclamation operations for the period just preceding submission of the program;

(5) Number of applications for permits, revisions, and renewals of permits for surface coal mining and reclamation operations or for coal exploration received annually for each of the most recent three years;

(6) Frequency of State inspections for each permit during the initial regulatory program;

(7) Number of coal exploration and underground and surface coal mining operations under permit being explored or actively mined, the number of operations under permit being actively reclaimed, and the number of permits on which reclamation operations are virtually complete (except for growth of required vegetation at the end of the month preceding submission); and

(8) Projections, if available from existing studies, of the projected annual coal production and geographic distribution of coal exploration and surface coal mining and reclamation operations for the next 5 years or the period encompassed by existing studies, according to tonnage, type of coal produced, and whether production will be by underground or surface mining.

(j) A summary table of existing and proposed program staff showing job functions and titles and required job experience and training;

(k) A description of how the staffing proposed for the State program will be adequate to carry out the functions including permitting and inspection for the work-load projected to ensure that coal exploration and surface coal mining and reclamation operations will be regulated in accordance with the requirements of the Act;

(l) A map showing the office locations of the regulatory authority and other agencies involved in the State program including the number of employees and job functions at each location;

(m) An explanation of projected use, if any, of professional and technical personnel that are available to the regulatory authority from other agencies, including the information required in Section 731.12(i);

(n) A description of the actual budget, including income and expenses used or to be used to administer the regulatory program for the current fiscal year and the prior fiscal year, and the projected annual budget for each of the next two fiscal years assuming supplemental funding pursuant to an approved State program and grants under Part 735 of this Subchapter;

(o) A description of the existing and proposed physical resources for use in the program such as office and laboratory space, vehicles and equipment;

(p) A narrative description of the history and progress of regulation in the State and other information as appropriate which would tend to demonstrate the State's capability to administer a permanent regulatory program;

(q) A description of special environmental protection standards and performance bond provisions, if any, of the State for the purpose of regulating anthracite coal mining as provided in Section 529 of the Act;

(r) A brief description of the other programs administered by the regulatory authority; and

(s) Such other information as the Director may require.

PART 732—PROCEDURES AND CRITERIA FOR APPROVAL OR DISAPPROVAL OF PROGRAM SUBMISSIONS

Sec.

732.1 Scope.
732.4 Responsibility.
732.11 Review by the Regional Director.
732.12 Notice and public hearing requirements.
732.13 Decision by the Secretary.
732.14 Resubmission of State programs.
732.15 Criteria for approval or disapproval of programs.
732.16 Terms and conditions for State programs.
732.17 State program amendments.

AUTHORITY: Secs. 102, 201(c), 501(b), 503, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 521, and 522, Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 473, 474, 478, 479, 480, 483, 484, 485, 486, 495, 498, 499, 501, 504, and 507 (30 U.S.C. 1202, 1211, 1251, 1253, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1271, and 1272).

§ 732.1 Scope.

This Part sets forth policy and procedures governing decisions approving or disapproving State program submissions and program amendments, including requirements for public participation.

§ 732.4 Responsibility.

(a) The Regional Director and the Director shall review program submissions, receive public comments, hold public hearings, and the Director shall recommend approval or disapproval of programs to the Secretary. The Secretary shall approve or disapprove programs.

(b) The Regional Director shall review program amendments and recommend approval or disapproval to the Director. The Director shall approve or disapprove program amendments.

§ 732.11 Review by the Regional Director.

(a) Immediately upon receipt of a program, the Regional Director shall publish in the FEDERAL REGISTER and in a newspaper of general circulation in the State a notice meeting the following requirements:

(1) The notice shall include the date of the submission of the program, a summary of its contents and indicate that it is available for review during regular business hours at the office of the Regional Director and that a public file for comments received will be established and open for review.

(2) The notice shall indicate that a review is being performed by the Regional Director to determine whether the program is complete and that the review will be completed 30 days from the date of the submission.

(3) The notice shall afford interested persons and groups 15 days from the date of publication of the notice to submit written comments or to request a public meeting with the Regional Director to discuss the completeness of the program.

(b) Within 30 days after receipt of a program, the Regional Director, after considering written comments and relevant information, shall determine whether the submission contains all of the elements required by Section 731.14 and shall publish his decision in the FEDERAL REGISTER. If the program contains the required elements, the submission is complete.

(c) If one or more required elements are missing, the Regional Director shall identify the missing elements and return the program submission as incomplete.

(d) If the program is returned as incomplete, the State shall have 30 days to make appropriate changes in its submission and return it to the Regional Director for review pursuant to procedures in paragraphs (a) and (b) of this Section. If at the expiration of the 30 day period the State has failed to submit a complete program, the Director shall initiate the process to promulgate and implement a Federal program for that State under Part 736 of this Subchapter. Initiation of this process does not preclude the State from making appropriate changes in its submission and returning it to the Regional Director for review.

§ 732.12 Notice and public hearing requirements.

(a) Upon determination that a program submission is complete, the Regional Director shall publish in the FEDERAL REGISTER and in a newspaper of general circulation in the State a notice meeting the following requirements:

(1) The notice shall include the date of submission of the program, a summary of its contents and indicate that it is available for inspection during regular business hours at the office of the Regional Director and at the central office and each field office of the State agency responsible for the submission. The notice in the FEDERAL REGISTER shall include the complete text of State statutes and regulations.

(2) The notice shall afford interested persons and groups an opportunity to submit, in writing, data and comments on the program. The comment period shall end on a date following the last public hearing held under paragraph (b) of this Section. The date on which the comment period ends shall be in the Federal Register notice.

(3) The notice shall identify the time and location at which the Office will hold the public hearing under paragraph (b) of this Section.

(b) A public hearing shall be held by the Regional Director no sooner than 60 days following the publication of the notice required by paragraph (a) of this Section. The hearing shall be informal and legislative in type.

(1) The format of the hearing and the rules of procedure for each hearing shall be determined by the Regional Director and published in the notice in the FEDERAL REGISTER.

(2) Additional hearings or additional time in which comments may be submitted may be allowed by the Regional Director, if either or both is deemed necessary or appropriate and proper notice is given as provided in paragraph (a) of this Section.

(c) Copies of written comments received shall be available for public inspection and copying at the offices of the Regional Director and the State agency responsible for submission.

(d) Upon completion of the hearing or hearings, the transcript, written presentations, exhibits and any post-hearing comments shall be transmitted by the Regional Director to the Director, together with a recommended decision from the Regional Director.

(e) Upon receipt of the recommendation of the Regional Director, the Director shall consider all relevant information including information obtained from all public hearings and comments, and shall recommend to the Secretary that he approve or disapprove the program in whole or in part. The recommended decision shall include findings which specify the reasons for the recommendation.

§ 732.13 Decision by the Secretary.

(a) After consideration of all relevant information, including information obtained from all public hearings and comments, and, after consideration of the Director's recommendation and findings, the Secretary shall issue a decision in writing either approving or disapproving the program, in whole or in part.

(b) The Secretary shall not approve a program until he has—

(1) Solicited and publicly disclosed the views of the Administrator of the Environmental Protection Agency, the Secretary of Agriculture, and the heads of other Federal agencies concerned with or having special expertise relevant to the program as proposed; and

(2) Obtained written concurrence of the Administrator of the Environmental Protection Agency with respect to those aspects of a State program which relate to air or water quality standards promulgated under the authority of the Federal Water Pollution Control Act, as amended (33 U.S.C. Section 1151-1175), or the Clean Air Act, as amended (42 U.S.C. Section 1857 et seq.).

(c) The decision shall include the findings upon which the decision is based. The decision and findings shall be mailed to the State.

(d) The Secretary shall issue his decision within 180 days of the Regional Director's receipt of a complete program submission under Section 732.11.

(e) All decisions approving or disapproving a program, in whole or in part, shall be published in the FEDERAL REGISTER, indicating, in the event of disapproval, that the State has 60 days to submit a revised program for consideration.

(f) If the Secretary disapproves a program, in whole or in part, the State shall have 60 days from the date of notification to submit a revised program to the Director for reconsideration. The Director shall publish in the FEDERAL REGISTER the contents of the revision and give notice providing a 30-day opportunity for comments. The Director shall consider the revised program and the comments received and recommend to the Secretary approval or dis-

approval of the program in whole or in part. The Secretary shall then either approve or disapprove the revised program in whole or in part within 60 days from the date of submission and publish the decision in the FEDERAL REGISTER. A decision disapproving the revised program either in whole or in part constitutes the final decision by the Department disapproving that program submission in its entirety.

(g) A decision by the Secretary approving a program submission establishes a State program for the State which submitted it and constitutes the final decision by the Department. A program submission shall not be finally approved unless it can be approved in whole.

§ 732.14 Resubmission of State programs.

If, by a final decision, the program is disapproved, the State may submit another program to the Regional Director at any time after implementation of a Federal program for that State under Part 736 of this Subchapter. Resubmission of State programs shall be made and acted upon pursuant to Sections 732.11, 732.12, 732.13, 732.15 and 732.16.

§ 732.15 Criteria for approval or disapproval of programs.

(a) The Secretary shall not approve the program unless, on the basis of the information obtained from the program submission, comments, testimony at the hearings, written presentations, and other relevant information, he finds that—

(1) The State demonstrated a good faith effort in implementing, administering and enforcing the initial program pursuant to the Act;

(2) The program provides for the State to carry out the provisions and meet the purposes of the Act and regulations of this Chapter to regulate coal exploration and surface coal mining and reclamation operations on non-Federal and non-Indian lands within the State and that alternative approaches proposed pursuant to Section 731.13 of this Subchapter achieve the same or more stringent regulatory results as the regulations of this Chapter;

(3) The State regulatory authority has, on the date of the complete program submission, the authority under State laws and regulations which regulate coal exploration and surface coal mining and reclamation operations—

(i) To implement, administer, and enforce environmental protection performance standards consistent with Subchapter K of this Chapter;

(ii) To implement, administer, and enforce a permit system consistent with the regulations of Subchapter G of this Chapter and to require permit fees with each application such that the approximate costs of review, administration and enforcement of such permits are recovered;

(iii) To control coal mining incidental to government financed construction consistent with Part 707 of this Chapter;

(iv) To regulate coal exploration operations consistent with Parts 776 and 815 of this Chapter;

(v) To implement, administer, and enforce a system of performance bonds and liability insurance, or other equivalent guarantees, consistent with the requirements of Subchapter J of this Chapter;

(vi) To enter, inspect, and monitor all coal exploration and surface coal mining and reclamation operations on non-Indian and non-Federal land within the State consistent with the requirements of Subchapter L of this Chapter;

(vii) To issue, modify, terminate and enforce notices of violation, cessation orders and show cause orders in accordance with Section 521 of the Act and consistent with the requirements of Subchapter L of this Chapter, including the same or similar procedural requirements and including authority for State inspectors to take the issue actions of this paragraph;

(viii) To impose civil penalties for violations of the State law, regulations, or terms and conditions of permits in accordance with Section 518 of the Act and consistent with Part 845 of this Chapter, including the same or similar procedural requirements;

(ix) To designate areas as unsuitable for surface coal mining consistent with Subchapter F of this Chapter;

(x) To cooperate and coordinate with and to provide documents and other information to the Office under the provisions of this Chapter;

(xi) To require the training, examination and certification of persons engaged in or responsible for blasting consistent with Subchapter M of this Chapter; and

(xii) To monitor, review and enforce the prohibition against indirect or direct financial interests consistent with Part 705 of this Chapter;

(4) The State regulatory authority and other agencies having a role in the State program have and will continue to have sufficient technical and administrative personnel and sufficient funding to implement, administer and enforce the provisions of the program, the requirements of paragraph (a) of this Section and other applicable State and Federal laws; and

(5) The State law and regulations in effect at the time of a complete program submission—

(i) Prohibit surface coal mining and reclamation operations without a permit issued by the regulatory authority;

(ii) Provide for civil and criminal sanctions for violation of the State law, regulations, or conditions of permits, including civil and criminal penalties, forfeiture of bonds, suspension or revocation of permits, and the issuance of cease and desist orders by the State regulatory authority and its inspectors;

(iii) Prohibit indirect or direct financial interests in coal mining operations by employees of the State regulatory authority consistent with Part 705 of this Chapter;

(iv) Provide for protection of State employees of the regulatory authority in accordance with the protection afforded Federal employees under Section 704 of the Act;

(v) Provide for public participation in the development, revision and enforcement of State regulations and the State program consistent with public participation required in the Act and regulations of this Subchapter;

(vi) Provide administrative review of program enforcement actions in accordance with Section 525 of the Act; and

(vii) Do not contain provisions inconsistent with those in the Act and the regulations of this Chapter.

(b) The Director may provide for other criteria necessary to meet the provisions of this Chapter in order to determine whether a State has the capability to carry out the provisions of the Act and this Chapter.

§ 732.16 Terms and conditions for State programs.

(a) The Director may establish terms and conditions for the administration and operation of an approved State program as he deems necessary, including but not limited to—

(1) Establishing a system for regularly reporting information collected by the State regulatory authority in the conduct of the State program;

(2) Requiring consultation with the Office on a regular basis with regard to the overall conduct of the State program; and

(3) Providing the Office with access to books and records of the regulatory authority upon request.

(b) The Director may modify the terms and conditions of the State program from time to time after notice to the State and after holding an informal conference, if requested, to reflect changes in the regulations of this Chapter, the conduct of the program or the coordination with the Office.

§ 732.17 State program amendments.

(a) A State program amendment is a written alteration of the provisions, terms or conditions of an approved State program whether accomplished on the initiative of the State regula-

tory authority or the Regional Director.

(b) The State regulatory authority shall promptly notify the Regional Director in writing of any significant events or proposed changes which affect the implementation, administration or enforcement of the approved State program. The Regional Director shall promptly notify the State regulatory authority if, in his opinion, any event or proposed changes in State law, regulations promulgated thereunder or changes in this Chapter or in the conduct of the program, may impair the implementation, administration or enforcement of the approved State program. At a minimum, notification shall be given either the State regulatory authority or the Regional Director regarding—

(1) Changes in the scope or objectives of the State program;

(2) Changes in the authority of the regulatory authority to implement, administer and enforce the approved program;

(3) Changes in the State law and regulations from those contained in the approved State program;

(4) Changes in staffing and resources of the regulatory authority and applicable divisions or departments of other agencies which have a role in approved State program;

(5) Changes in agreements between the regulatory authority and other agencies which have a role in the approved State program;

(6) Changes in funding or budgeting relative to the approved State program; and

(7) Significant changes in the number or size of coal exploration or surface coal mining and reclamation operations in the State.

(c) Within 30 days of receipt of notification in writing of events or proposed changes that may require a State program amendment, or whenever the Regional Director becomes aware of conditions described in this Subsection, the Regional Director shall determine whether a State program amendment is required and notify the State regulatory authority of his decision.

(d) State program amendments may be required—

(1) Whenever changes in the Act or regulations of this Chapter affect the State's authority or ability to implement, administer and enforce the approved program;

(2) Whenever conditions or events change that affect the conduct of the State program, or whenever such conditions or events indicate that the approved State program no longer meets the requirements of the Act or the regulations of this Chapter; or

(3) Whenever State laws or regulations contained in an approved State program are changed by legislative, administrative or judicial action so as to render any regulatory requirement or performance standard less stringent than that contained in the approved State program.

(e) If the Regional Director determines that a State program amendment is required, the State regulatory authority shall, within 10 days after notification of that decision, submit to the Regional Director a written amendment designed to re-establish a State program that meets the requirements of the Act and this Chapter.

(1) If the State regulatory authority does not propose an amendment within 10 days from the receipt of the notice, or the amendment is not approved under this paragraph, the Director shall begin proceedings under Part 733 of this Subchapter to either enforce that Part of the State program affected or withdraw approval, in whole or in part, of the State program and implement a Federal program.

(2) The procedures and criteria for approval or disapproval of an amendment shall be the same procedures and criteria as required in Sections 732.12, 732.13 and 732.15 for approval or disapproval of a State program except that the Regional Director shall publish the required notice, hold the public hearing and recommend approval or disapproval to the Director and the Director shall approve or disapprove the amendment.

PART 733—MAINTENANCE OF STATE PROGRAMS AND CRITERIA AND PROCEDURES FOR SUBSTITUTING FEDERAL ENFORCEMENT OF STATE PROGRAMS AND WITHDRAWING APPROVAL OF STATE PROGRAMS

Sec.

733.1 Scope.
733.4 Responsibilities.
733.11 General requirements for maintaining State programs.
733.12 Procedures for substituting Federal enforcement for a State program or withdrawing approval of State programs.
733.13 Criteria for substituting Federal enforcement for a State program, or withdrawing approval of State programs.

AUTHORITY: Secs. 102, 201, 501(b), 503, 504, 517, and 521 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 471, 498, and 504 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1267, and 1271).

§ 733.1 Scope.

This Part establishes requirements for the maintenance of State programs and procedures for substituting Federal enforcement of State programs and withdrawing approval of State programs.

§ 733.4 Responsibilities.

(a) The State regulatory authority is responsible for implementing, enforcing and maintaining an approved State program, except where the Secretary has assumed, by substitution, this responsibility.

(b) The Regional Director is responsible for monitoring State program maintenance. The Director is responsible for Federally enforcing and maintaining State programs or withdrawing approval of State programs not maintained as provided in the Act or the regulations of this subchapter.

§ 733.11 General requirement for maintaining a State program.

Each State with an approved State program shall administer, implement, enforce and maintain it in accordance with the Act, this Chapter and the provisions of the State program as approved by the Secretary.

§ 733.12 Procedures for substituting Federal enforcement for a State program or withdrawing approval of State programs.

(a) The Regional Director shall evaluate the administration of each State program at least annually and when any person reports that a State is not maintaining its approved State program.

(b) If the Regional Director has reason to believe that a State is not effectively administering any part of its approved State program, he shall promptly notify the State regulatory authority in writing. The Regional Director shall provide sufficient information to allow the State regulatory authority to determine what portions of the program he believes are not being effectively administered and specify the time period for accomplishing remedial actions necessary for effective administration of the State program.

(1) The Regional Director shall provide the State regulatory authority an opportunity for an informal conference if requested within 15 days of receipt of the notification.

(2) If an informal conference is not held or if, following the conference, the Regional Director still has reason to believe, on the basis of information available to him, that the State is failing to administer effectively a part or all of a State program, he shall give notice to the State and to the public specifying the basis for his belief and shall hold a public hearing in the State within 30 days of the notice.

(c) Upon completion of the hearing, the Regional Director shall transmit the information available to him including the hearing transcript, written presentations and written comments to the Director along with a recommendation from the Regional Director to either continue the State program as approved or take action prescribed in either paragraph (d) (1) or (2) of this Section.

(d) If, on the basis of information available to the Office, including the results of the hearing, the Director finds that the State has failed to administer effectively part or all of its approved State program, and that the State has not adequately demonstrated its capability and intent to administer the State program, the Director shall either—

(1) Substitute for the State regulatory authority direct Federal enforcement of all or part of the State program in accordance with paragraph (e) of this Section; or

(2) Withdraw approval of the State program, in whole or in part, in accordance with paragraph (f) of this Section.

(e) Substituted Federal enforcement.

(1) The Director shall give public notice of a finding under paragraph (c) of this Section and specify the extent to which he is instituting direct Federal enforcement of a State program.

(2) During the period beginning with such public notice and ending when the State satisfies the Director that it will enforce the State program effectively, the Director shall enforce and adopt additional regulations as may be required to the extent he has assumed direct Federal enforcement of the State program by—

(i) Enforcement of any permit condition required under the Act;

(ii) Issuance of any new or revised permit pursuant to any additional regulation that the Director may promulgate at the time of assumed enforcement; and

(iii) Conducting inspections and issuance of such notice, orders and assessments of penalties that are necessary for compliance with those permit conditions, the Act, and the State program in accordance with Subchapter L.

(3) In the case of a State permittee who has met his obligations under an existing State permit and who did not willfully secure the issuance of such permit through fraud or collusion, the Director shall give the permittee reasonable time to conform ongoing surface mining and reclamation operations to the requirements of the Act before suspending or revoking the State permit.

(f) Withdrawing approval of State program.

The Director shall give public notice of a finding under paragraph (c) of this Section, specifying the extent to which he is withdrawing approval of a State program. Not later than the issuance of such notice, the Director shall propose promulgation of, and thereafter promulgate and implement a Federal program for the affected State, in accordance with Part 736 of this Subchapter.

§ 733.13 Criteria for substituting Federal enforcement for State programs or withdrawing approval of State programs.

In evaluating the maintenance, administration or enforcement of a State program for purposes of determining whether to substitute direct Federal enforcement of the State program or to withdraw approval of part or all of the program, the Director shall consider the record of the State in fulfilling the conditions of the original approval or adjusting to new circumstances in accordance with requirements of the Act and this Chapter.

PART 736—FEDERAL PROGRAM FOR A STATE

Sec.

736.1 Scope.
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AUTHORITY: Secs. 102, 201, 405, 501, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 521, 522, 525, and 705 of Pub. L. 95-87, 91 Stat. 448, 449, 459, 468, 470, 471, 473, 474, 478, 479, 480, 483, 484, 485, 486, 495, 498, 499, 501, 504, 507, 511, and 520 (30 U.S.C. 1202, 1211, 1235, 1251, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1271, 1272, 1275, and 1294).

§ 736.1 Scope.

This Part establishes standards and procedures for the promulgation, implementation, revision and withdrawal of a Federal program for a State on non-Federal and non-Indian lands.

§ 736.2 Objectives.

The objectives of this Part are to provide standards and procedures for the Director to follow in the promulgation, implementation, revision and withdrawal of a Federal program on non-Federal and non-Indian lands and to provide maximum public participation in these processes to ensure that the requirements of the Act are met.

§ 736.3 Responsibility.

The Director has the responsibility to promulgate, implement, enforce, maintain, revise and withdraw Federal programs on non-Federal and non-Indian lands in accordance with this Part and Section 504 of the Act.

§ 736.4 Authority.

(a) Promulgation and implementation of a complete Federal program for a State vests the Director with exclusive jurisdiction and makes him the regulatory authority for the regulation and control of all coal exploration and surface coal mining and reclamation operations on non-Federal and non-Indian lands within such State.

(b) Promulgation and implementation of a partial Federal program for a State vests the Director with exclusive jurisdiction and makes him the regulator authority for the regulation and control of those aspects of coal exploration and surface coal mining and reclamation operations covered by such Federal program and on non-Federal and non-Indian lands within such State.

(c) Following the final disapproval of a State program under 30 CFR Part 732, and prior to the promulgation of a complete Federal program for a State under 30 CFR 736.11(a), including judicial review of such Federal program, existing surface coal mining and reclamation operations may continue pursuant to the provisions of Section 502 of the Act and 30 CFR Parts 710, 715, 716, 717, 720, 721, 722, and 723. During this period, no new permits for surface coal mining and reclamation operations shall be issued by the State whose program has been disapproved. Permits which lapse during this period may continue in full force and effect within the specified permit area until promulgation of a Federal program for the State whose program has been disapproved.

§ 736.11 General procedural requirements.

(a) Promulgation

(1) Not later than June 3, 1980, the Director shall promulgate and, subject to the provisions of this Part, implement a Federal program for a State if the Director reasonably expects surface coal mining to exist in a State by June 1985, and the State fails to—

(i) Submit a State program covering surface coal mining and reclamation operations to the appropriate Regional Director within the time provided in 30 CFR Part 731; or

(ii) Resubmit an acceptable State program within 30 days of a notice of incompleteness under 30 CFR 732.11 or within 60 days of a notice of a State program disapproval pursuant to 30 CFR 732.13(f). The Director shall not promulgate a Federal program prior to the expiration of the initial period allowed for submission of a State program as provided in 30 CFR 731.11.

(2) The Director shall promulgate a complete Federal program for a State upon the withdrawal of approval of an entire State program.

(3) The Director shall promulgate a partial Federal program for a State

upon the withdrawal of approval of part of a State program.

(b) Revision. The Secretary may revise a Federal program for a State if necessary to further the purposes of the Act and the regulations adopted under the Act.

(c) Termination. The Director shall terminate appropriate portions of a Federal program for a State upon—

(1) Approval of a State program under 30 CFR Parts 731 and 732 that replaces a complete Federal program for that State; or

(2) Approval of a partial State program under 30 CFR Part 733 that replaces a partial Federal program.

§ 736.12 Public notice requirements.

Prior to the promulgation or revision of a Federal program, the Director shall give public notice as follows:

(a) Notice shall be published in the FEDERAL REGISTER at least 60 days before the date of the hearing required under Section 736.13 and shall include—

(1) A statement of the basis and purposes of the proposed program or revision;

(2) The proposed regulations of the program or revision;

(3) The proposed effective date of the program or revision;

(4) The location of the Regional Office and State Office in the capital city where the text of the proposed program or revision and any supporting evidence may be reviewed or copied;

(5) The date, time and location in the State where the Office will hold at least one public hearing under the supervision of the Regional Director; and

(6) A summary of the format and the rules of procedure of the public hearing, as required under 30 CFR 736.13.

(b) The Regional Director shall publish notice at least once a week for three weeks within the 30 days before the hearing in at least one newspaper of general circulation in the coal mining area of the affected State. This notice shall be identical to the notice required under paragraph (a) of this Section, except that a brief description of the contents of the proposed program or revision may be substituted for the proposed regulations of the program or revision.

§ 736.13 Public comment.

(a) Comments shall be solicited by the Director from the Administrator of the Environmental Protection Agency, the Secretary of Agriculture and the heads of other Federal agencies concerned with or having special expertise relevant to the proposed promulgation or revision of the program.

(b) The Regional Director shall provide an opportunity for interested persons to submit, in writing, data and comments on the proposed promulgation or revision of a Federal program within 60 days after publication of the notice in the FEDERAL REGISTER.

(c) Before promulgation or revision of a Federal program for a State, the Regional Director shall hold at least one public hearing within the State for the purpose of affording interested persons an opportunity to submit data and comments on the proposed Federal program for the State.

(1) The hearings shall consist of—

(i) Procedures that are legislative in type, which include the compilation of an open record of the hearing, and

(ii) Presentation by the Regional Director or his designee of the contents of the proposed program or revision.

(2) Additional hearings or additional time for submitting comments after the hearing may be allowed by the Regional Director as deemed necessary or appropriate.

(3) Upon completion of the hearing or hearings, the Regional Director shall transmit to the Director the hearing transcript, the written presentations, exhibits submitted, public comments and his recommendation concerning the promulgation of a Federal program and any proposed regulations.

(d) Copies of all written comments received under this Section and the transcript of the public hearing shall be made available for public inspection and copying at the office of the appropriate Regional Director and at the State office in the capital city of the State.

§ 736.14 Director's decision.

(a) After considering all available relevant information, including information obtained from the public hearings and written comments, the Director shall decide whether to promulgate or revise a Federal program for the State.

(b) The Director shall publish notice of his decision in the FEDERAL REGISTER, including a statement of the basis and purpose for such decision, the regulations of the Federal program for the State or revision thereof, and the effective date of the program or revision.

§ 736.15 Implementation, enforcement and maintenance of a Federal program.

(a) The Director shall implement, maintain and enforce the provisions of a Federal program or any revision not later than 30 days after the Federal program is promulgated or revised. The provisions of the Federal program for designation of lands as unsuitable, under 30 CFR Part 765 shall not apply for a period of one year following the promulgation or revision unless the provisions for designation are promulgated because of a State's failure to administer adequately a process for designation of lands in a State program under 30 CFR Part 764, and to the extent that a Federal program is implemented under requirements of 30 CFR 761.8.

(b) Permits issued pursuant to a previously approved State program shall be valid but reviewable under a Federal program. Immediately following promulgation of a Federal program, the Director shall review these permits to determine that the requirements of the Act and this Chapter are not violated. If the Director determines that any permit was granted contrary to the requirements of this Act, he shall—

(1) Inform the permittee,

(2) Provide the permittee an opportunity for a hearing,

(3) Provide the permittee a reasonable opportunity to submit that portion of the permit application which the Director determines to be relevant, and

(4) Provide the permittee a reasonable time to conform ongoing surface mining and reclamation operations to the requirements of the Federal program, as prescribed in the Federal program for the State.

§ 736.16 Federal program termination procedures.

Withdrawal of a Federal program shall be accomplished through the procedures for approval of a State program under 30 CFR Part 732.

§ 736.18 Consolidation of procedures.

The Director may consolidate public notices and hearings for the promulgation or revision of a Federal program for a State under this Part, with public notices and hearings for the approval, disapproval or withdrawal of a State program under 30 CFR Parts 732–733.

§ 736.21 General requirements.

(a) Any complete Federal program promulgated or revised by the Director shall include the contents identified in 30 CFR 736.22.

(b) Any partial Federal program shall include all of the contents identified in 30 CFR 736.22 for all aspects of coal exploration and surface coal mining and reclamation operations within the State which are regulated under the partial program.

§ 736.22 Contents of a Federal program.

(a) In promulgating or revising any Federal program for a State, the Director shall—

(1) Consider the nature of that State's soils, topography, terrain, climate and biological, chemical, geologi-

cal, hydrological, agronomic and other relevant physical conditions;

(2) Include any provisions that are necessary to implement the requirements of the Endangered Species Act of 1973 (16 U.S.C. 531 et seq.), the Fish and Wildlife Coordination Act (16 U.S.C. 661-666c), the National Historic and Preservation Act of 1966 (16 U.S.C. 470), the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a) and other relevant Federal laws imposing duties upon the Secretary; and

(3) Include, if required pursuant to 30 CFR 736.23, any performance standards for the regulation of coal exploration and surface coal mining and reclamation operations more stringent than those otherwise provided in this Chapter and the Act.

(b) Any Federal program for a State, including appropriate portions of a partial Federal program, which is promulgated or revised by the Director shall provide for Federal regulation of coal exploration and surface coal mining and reclamation operations on lands within the State in accordance with the requirements of the Act, including at a minimum the following provisions: 30 CFR Parts 700, 701 and 707; 30 CFR Parts 760, 761, 762 and 765; Subchapter G; Subchapter J; Subchapter K; 30 CFR Parts 842, 843 and 845; and Subchapter M of this Chapter.

(c) For the purpose of avoiding duplication, the Federal program shall include a process for coordinating the review and issuance of permits for surface coal mining and reclamation operations under the Federal program with any other Federal, State or local planning or permit process applicable to such operations in the jurisdiction involved, including but not limited to—

(1) Permit requirements of the Clean Air Act (42 U.S.C. 7401 *et seq.*), Clean Water Act (30 U.S.C. 1251 *et seq.*), and the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 3251-3259);

(2) the applicable requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4332); and

(3) plans approved by the Administrator of the U.S. Environmental Protection Agency under Sections 208 or 303(c) of the Clean Water Act, (33 U.S.C. Section 1288, 1313(c)).

§ 736.23 Federal program effect on State law or regulations.

(a) Whenever a Federal program is promulgated or revised for a State, any statutes or regulations of the State regulating coal exploration or surface mining and reclamation operations subject to the Act shall be preempted and superseded by the Federal program insofar as they are inconsistent, less stringent or preclude compliance with the purposes and requirements of the Act and the Federal program. In promulgating or revising a Federal program for a State, the Director shall set forth any State law or regulation which is pre-empted and superseded by the Federal program.

(b) The provision of any State law or regulation which provides for more stringent land use and environmental control and regulation of coal exploration or surface coal mining and reclamation operations than do the provisions of the Act or any regulation issued under the Act shall not be preempted and superseded by the Secretary and shall be incorporated into the Federal program for the State.

§ 736.24 Federal program effect on State funding.

(a) Upon the withdrawal of a State program and the promulgation and implementation of a complete Federal program for a State, the Director shall not—

(1) Approve, fund or continue to fund a State abandoned mine reclamation program, in accordance with Section 405(c) of the Act and 30 CFR 884.14, 884.16 and 886.18, and

(2) Make any grants to assist the State in administering and enforcing State programs under the Act and 30 CFR 725.11 and 735.12.

(b) Upon the withdrawal of a State program in part and the promulgation and implementation of a partial Federal program for a State, the Director shall not—

(1) Approve, fund or continue to fund a State abandoned mine reclamation program, in accordance with Section 405(c) of the Act and 30 CFR 884.14, 884.16 and 886.18, unless the Director finds in writing that discontinuation of funding would not be consistent with achieving the purpose of the Act, and

(2) Make any grants to assist the State in administering and enforcing State programs under the Act and 30 CFR 725.11 and 735.12, unless the Director finds in writing that discontinuation of funding would not be consistent with achieving the purposes of the act.

SUBCHAPTER D—FEDERAL LANDS PROGRAM

PART 740—GENERAL REQUIREMENTS FOR SURFACE COAL MINING AND RECLAMATION OPERATIONS ON FEDERAL LANDS

Sec.
740.1 Scope and purpose.
740.2 Objectives.
740.4 Responsibilities.
740.5 Definitions.

AUTHORITY: Secs. 102, 201, 523, and 701 of Pub. L. 95-87, 91 Stat. 448, 449, 510, 516 (30 U.S.C. 1202, 1211, 1273, 1291); and 41 Stat. 437, as amended (30 U.S.C. 1832).

§ 740.1 Scope and purpose.

This Subchapter is intended to:

(a) Establish the procedures and requirements for permits to conduct surface coal mining and reclamation operations on Federal lands;

(b) Prescribe the performance standards applicable to mining and reclamation on Federal lands;

(c) Prescribe the requirements for bonds for mining on Federal lands;

(d) Establish the responsibilities and procedure for inspection and enforcement on Federal lands;

(e) Set forth the requirements for State-Federal cooperative agreements with respect to regulation by a State of surface coal mining and reclamations operations on Federal lands within a State under Section 523(c) of the Act;

(f) Set forth the requirements for training, examination and certification of persons engaged in blasting or the use of explosives in surface coal mining operations on Federal lands; and

(g) Define the functions and responsibilities of Federal and State agencies in administering the regulations in this Subchapter.

§ 740.2 Objective.

The objective of this Subchapter is to ensure that coal exploration and surface coal mining and reclamation operations involving Federal coal interests, regardless of surface ownership, comply with the environmental protection requirements of the Act, this Chapter and all other applicable State and Federal laws.

§ 740.4 Responsibilities.

(a) The Secretary is responsible for the approval or disapproval of permit applications.

(b) The Secretary, acting through the Director, is authorized to execute, modify or terminate State-Federal cooperative agreements in accordance with the procedures in 30 CFR 745.

(c) The Secretary, acting through the Director, is responsible for the process of designating areas of Federal lands as unsuitable for all or certain types of surface coal mining operations in accordance with the procedures and requirements of 30 CFR 769.

(d) The Director is responsible for the review and for recommending approval or disapproval of permit applications. In the exercise of this responsibility the Director will consult and obtain the consent of the authorized officer of the surface managing agency with respect to special requirements relating to protection of the non-mineral resources of the lands involved, and the U.S. Geological Survey concerning requirements relating to

development, production and mineral resource recovery aspects.

(e) The Director is responsible for approval of authorizations to conduct experimental practices on Federal lands in accordance with Section 741.13(c).

(f) The Regional Directors, with the concurrence of the authorized representative of the surface managing agency, are responsible for approval of performance bonds required in accordance with 30 CFR 742.

(g) The Regional Directors are responsible for inspection and enforcement to ensure compliance with the performance standards of this Chapter in accordance with 30 CFR 744.

(h) Review of the mining and operations plan section of the mining plan is the responsibility of the U.S. Geological Survey, which recommends approval or disapproval to the Secretary.

§ 740.5 Definitions.

As used in this Subchapter, except where otherwise indicated:

Authorized officer means any officer designated by a Federal agency having administrative jurisdiction over Federal lands or minerals to exercise his authority in matters relating to the provisions of this Subchapter.

Authorized state regulatory authority means any State regulatory authority exercising authority to regulate surface coal mining and reclamation operations on Federal lands under a State-Federal cooperative agreement approved under 30 CFR 745.

Lease means a Federal mineral lease, issued by BLM pursuant to the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 *et. seq.*). The name of the specific instrument is used herein where necessary for precise meaning or fuller explanation.

Lease terms and conditions means all of the standard provisions of a Federal coal lease including provisions relating to lease duration, fees, rentals, royalties, bond, production and record keeping requirements, and lessee rights of assignment, extension and renewal, termination and expiration.

Lease stipulations means site specific requirements relating to protection of the environment and surface and mineral resources included in Federal coal leases in addition to other terms and conditions.

Mining Plan means a complete mining and reclamation plan that complies with the requirements of the Mineral Leasing Act of 1920 as amended, the Surface Mining Control and Reclamation Act of 1977 and all other applicable laws and regulations.

Mining Supervisor means the area Mining Supervisor, Conservation Division, U.S. Geological Survey, or District Mining Supervisor or other subordinate acting under his direction.

Operator means any person engaged in coal mining who removes or intends to remove more than 250 tons of coal from the earth or coal refuse piles by mining within 12 consecutive calender months in any one location.

Surface managing agency means a Federal agency having administrative jurisdiction over the surface of Federal lands or over Federal minerals.

PART 741—PERMITS

Sec.

741 Permits.
741.1 Purpose and scope.
741.4 Responsibilities.
741.11 General obligations.
741.12 Permit applications.
741.13 Permits for special operations.
741.14 Permit terms.
741.15 Conditions of permit.
741.16 Criteria for permit approval or denial.
741.17 Public participation in permit review process.
741.18 Availability of information.
741.19 Permit review processing.
741.20 Review of permit applications.
741.21 Renewal of permits.
741.22 Review of approved permits and permit revisions.
741.23 Transfer, assignment, or sale of rights.
741.24 Revocation of permits.

AUTHORITY: Secs. 102, 201, 506, 507, 508, 509, 510, 511, 513, 514, 515, 516, 517, 522, 523, 527, and 711, Pub. L. 95-87, 91 Stat. 448, 449, 473, 474, 478, 479, 480, 483, 484, 485, 486, 495, 498, 507, 510, 513, 523. (30 U.S.C. 1202, 1211, 1256, 1257, 1258, 1259, 1260, 1261, 1263, 1264, 1265, 1266, 1267, 1272, 1273, 1301); and 41 Stat. 437, as amended (30 U.S.C. 181).

§ 741.1 Purpose and scope.

This Part is intended to:

(a) Ensure that surface coal mining and reclamation operations on Federal lands are conducted only after the Department has determined that reclamation required by the Act is feasible;

(b) Establish regulatory procedures governing the process for making applications for permits on Federal lands and for the review, approval, disapproval of applications by the Department;

(c) Establish a procedure for public participation in the permit review process;

(d) Establish the criteria and procedures for revision or renewal of Federal permits; and

(e) Establish procedures for the revocation of permits.

§ 741.4 Responsibilities.

(a) The Director, acting through the Regional Directors, has the responsibility to receive and review applications for permits, revisions, and renewals and to recommend approval, disapproval or approval upon condition to the Secretary for surface coal mining and reclamation operations in States that do not have an approved State-Federal cooperative agreement.

(b) In a State where there is an approved State-Federal Cooperative Agreement, the authorized State regulatory authority and the Regional Director have the responsibility to jointly review applications for permits, revisions, and renewals and recommend approval, disapproval or approval upon condition to the Secretary under 30 CFR 745.

(c) The Mining Supervisors and the authorized officers of the surface managing agencies and the Regional Directors are responsible for formulating special requirements relating to development, production and resource recovery, the conservation and protection of natural resources, and the post-mining land use to be included in mining and reclamation plans.

§ 741.11 General obligations.

(a) Not later than two months following the effective date of the regulations in this Subchapter, all operators of surface coal mining and reclamation operations on Federal lands and other persons who expect to conduct such operations after eight months from such effective date shall file a complete application for a permit to be issued in accordance with this Subchapter. The application shall cover those areas in which the operator proposes to conduct surface mining and reclamation operations on and after eight months from the effective date.

(i) Except as provided in paragraph (b) of this Section, on or after eight months from the effective date of the regulations in this Subchapter, no person shall conduct surface coal mining and reclamation operations on Federal lands unless such person has first obtained a valid permit issued by the Office under the regulations in this Part.

(ii) Any person who conducts a surface coal mining and reclamation operation which includes both Federal and private lands shall conduct the operation on private lands in accordance with the requirements of this Part.

(b) A person who conducts surface coal mining and reclamation operations under an approved mining plan may conduct the operations beyond the period prescribed in paragraph (a) of this Section, if all of the following conditions are present:

(1) Timely and complete application for a permit has been made in accordance with the provisions of the Act and this Part; and

(2) The Office has not yet rendered an initial decision with respect to the application.

(c) No person shall conduct a surface coal mining and reclamation operation under a permit:

(1) Issued pursuant to the regulations in this Subchapter, except in compliance with the terms and conditions of the permit, the requirements of the lease or license, and any applicable State or Federal regulations; or

(2) Allowed to continue in effect pursuant to paragraph (b) of this Section, except in compliance with all terms and conditions of the permit, the requirements of the lease or license, the Act, and Parts 710, 715, 716, and 717 of this Chapter and State laws and regulations made applicable through a cooperative agreement.

§ 741.12 Permit applications.

(a) *Permit fee.* An application for a permit to conduct surface mining and reclamation operations on Federal lands shall be accompanied by a fee to cover the administrative costs of reviewing the application. The amount of the fee shall be determined by a fee table published by the Director.

(b) *Copies required.* The applicant shall file seven copies of the complete permit application with the Regional Director.

(c) *Contents of applications.*

(1) A permit application shall be submitted as part of a Mining Plan and shall include:

(i) The legal, financial, compliance and related information required by 30 CFR 778 for surface mines or 30 CFR 782 for underground mines;

(ii) The information on environmental resources in the permit and adjacent areas required by 30 CFR 779 for surface mines or 30 CFR 783 for underground mines;

(iii) A reclamation and operation plan for surface mining operations which meets the requirements of 30 CFR 780 or, a reclamation and operation plan for underground operations which meets the requirements of 30 CFR 784; and, in addition, the method of mining, the mining sequence, and the proposed production rate for the life of the mine; and

(iv) A mining and operation plan which covers the life of the mine and meets the requirements of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et. seq.) and 30 CFR 211.

(2) An applicant seeking authorization to conduct special categories of mining shall include in his application, in addition to the information required in paragraph (a) of this Section, all of the information required by 30 CFR 785.

(3) Where the surface of the Federal lands is subject to a lease or permit issued by the Federal government, the application for a permit shall include the written consent of the permittee or lessee to enter and commence surface coal mining operations on such lands. Where written consent cannot be obtained by the applicant a Federal lessee protection bond shall be submitted to the Regional Director according to 30 CFR 742.13.

§ 741.13 Permits for special operations.

(a) Persons seeking to engage in special bituminous surface coal mining shall comply with 30 CFR 785.12.

(b) Persons seeking to conduct experimental practices shall comply with 30 CFR 785.13.

(c) Persons seeking to engage in steepslope mining shall comply with 30 CFR 785.14.

(d) Persons seeking to engage in mountain-top removal operations shall comply with 30 CFR 785.15.

(e) Persons seeking a permit allowing for variances from the requirement in Subchapter K requiring restoration of lands to approximate original contour shall comply with 30 CFR 785.16.

(f) Persons seeking to engage in surface coal mining and reclamation operations on prime farmlands shall comply with 30 CFR 785.17.

(g) Persons seeking to engage in combined surface and underground mining operations shall comply with 30 CFR 785.18.

(h) Persons seeking to engage in surface coal mining and reclamation in or adjacent to alluvial valley floors in arid or semi-arid areas west of the 100th meridian shall comply with 30 CFR 785.19.

§ 741.14 Permit terms.

(a) Each permit to conduct surface coal mining and reclamation operations on Federal lands shall be issued for a fixed term not to exceed five years. If the applicant satisfies the following requirements, a longer specified permit term may be granted:

(1) A longer permit term is reasonably needed to allow the applicant to obtain necessary financing for equipment and opening of the operation and this need is verified, in writing, by the applicant's proposed source for the financing; and

(2) The application is full and complete for the longer term.

(b) A permit shall terminate, if the permittee has not commenced the surface coal mining operation covered by the permit within three years of the issuance of the permit. The Secretary may grant a reasonable extension of time, upon a written showing that the extension of time is necessary because litigation precluding the commencement is threatening substantial economic loss to the permittee, or because of conditions beyond the control and without the fault or negligence of the permittee. An extension of time may not be granted if the effect of such extension would be to extend the term of a Federal coal lease beyond the period allowed for diligent development under the terms and conditions of the lease and the regulations of 43 CFR 3500. With respect to coal to be mined for use in a synthetic fuel facility or specific major electric generating facilities, the permittee shall be deemed to have commenced surface mining operations at such time as the construction of the synthetic fuel or generating facilities is initiated.

§ 741.15 Conditions of permits.

All permits issued under this Part shall reflect consideration of the diverse physical, climatological, and other unique characteristics of the Federal lands in question and shall include the terms and conditions of 30 CFR 786.

§ 741.16 Criteria for permit approval or denial.

(a) No permit or revision application shall be approved, unless the application affirmatively demonstrates and the Secretary finds, in writing, on the basis of information in the application or from information otherwise available, which is documented in the approval and made available to the applicant, that the application meets the criteria for approval of permits set forth in 30 CFR 786.

(b) Subject to valid existing rights, no permit shall be approved which adversely affects any publicly owned park or any place included or eligible for listing in the National Register of Historic Places, unless approved jointly by the Federal, State, or local agency with responsibility for such park or places;

(c) No permit shall be approved to conduct surface coal mining and reclamation operations:

(1) Within 100 feet of the outside right-of-way line of any public road, except:

(i) Where a mine access road or haulage road joins the right-of-way line; or

(ii) Where the Secretary and any necessary State authorities allow the public road to be relocated or the area affected to be within 100 feet of the road, upon the basis of a written finding, made after public notice and opportunity for public hearing in accordance with 30 CFR 741.17, that the interests of the public and each landowner affected shall be protected and upon the completion of any necessary State review; or

(2) Within 300 feet of any occupied dwelling, unless the owner thereof has consented, in writing, to mining closer than 300 feet, nor within 300 feet of any public building, school, church, community or institutional building, public park, or within 100 feet of a cemetery.

(d) No permit shall be approved to conduct surface coal mining and recla-

mation operations until the applicant has submitted the lease bond, performance bond, and Federal lessee bond required under 30 CFR 742.

(e) If the operations are on Federal lands in a State having an approved State-Federal cooperative agreement, no permit shall be approved until both the Secretary and the authorized State regulatory authority have concurred in issuance of the permit.

(f) No permit to conduct surface coal mining and reclamation operations shall be approved unless the permit application complies with each requirement of all other applicable Federal laws, including but not limited to, the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq) and the Federal Lands Policy and Management Planning Act of 1976 (43 U.S.C. 1701 et seq.).

§ 741.17 Public participation in permit review process.

The provisions for public participation in the permit review process in 30 CFR 787 shall apply to the review of each application to conduct surface coal mining and reclamation operations under this Subchapter.

§ 741.18 Availability of information.

(a) Information in a permit application on file with the Office shall be open for public inspection and copying at reasonable times upon the written request of the applicant, *Provided* that:

(1) Information in a permit application which pertains only to the analysis of the chemical and physical properties of the coal, except information on a mineral or elemental content which is potentially toxic in the environment, shall be kept confidential and not made a matter of public record; and

(2) Information in exploration or mining and reclamation portions of the application, which is required to be filed with the Regional Director only under Section 508 of the Act and which is not required to be disclosed by the Freedom of Information Act (5 U.S.C. 552(b)), shall be held in confidence by the Regional Director according to 43 CFR Part 2.

(b) Information in a permit application required to be kept confidential under paragraph (a) of this section, shall be clearly identified by the applicant by marking each page of the document with the words "CONFIDENTIAL INFORMATION" at the top of the page. All pages so marked shall be physically separated from other portions of the application.

§ 741.19 Permit review processing.

(a) Upon receipt of an application for a permit, the Regional Director shall, when a permit application or a proposed revision of an approved permit involves operations on Federal lands within the boundaries of National Forest System lands, transmit a copy of the complete application or proposed revision to the Secretary of Agriculture with a request for consent.

§ 741.20 Review of permit applications.

(a) The Director shall review the complete application, written comments, written objections submitted and records of any public meeting held under Section 741.17 and recommend approval, denial or approval upon condition to the Secretary.

(b) Before issuance of the permit, the Regional Director shall require that the applicant file a performance bond or provide other equivalent guarantees in accordance with 30 CFR 742.

(c) If the Regional Director determines that any surface coal mining operation owned or controlled by the applicant is currently in violation of the Act or of any air or water environmental protection law, rule or regulation of the United States, or of any department or agency in the United States, then, before making a decision to approve the application, the Regional Director shall require the applicant to submit proof, satisfactory to the Regional Director, Department or agency which has jurisdiction over such violation, that such violation has been corrected or, is being corrected.

(d) Before any final determination by the Regional Director that the applicant, or the operator specified in the application, controls or has controlled mining operations with a demonstrated pattern of willful violation of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provision of the Act, the applicant or operator shall be afforded an opportunity for an adjudicatory hearing on the determination as provided for in the Federal Lands program.

§ 741.21 Renewal of permits.

Each valid permit issued under this Subchapter shall carry with it the right of successive renewal upon expiration, for areas within the boundaries of the existing permit, in accordance with the requirements of 30 CFR 791. Terms of a permit to conduct operations under a lease issued pursuant to the Mineral Leasing Act, as amended, may not be extended beyond the period allowed for diligent development according to Section 7 of that Act.

§ 741.22 Review of approved permits and permit revisions.

(a) The Regional Director shall, upon the basis of an inspection, complaints received, reports from permittees or other relevant information, review each Federal permit issued and outstanding at a minimum frequency of once each three years from the date of original issuance of the permit and, in any event, at least once during the term of a permit.

(b) Upon the recommendation of the Director, the Secretary may require, by order, supported by written findings, reasonable revision or modification of the permit provisions, in accordance with the procedures in 30 CFR 790.

(c) Where changes or other factors listed in 30 CFR 790 require a permit revision, the permittee may apply for a revised permit in accordance with the requirements of 30 CFR 790. The permittee shall submit seven copies of a permit revision application to the Regional Director.

§ 741.23 Transfer, assignment, or sale of rights.

(a) The provisions of 30 CFR 792 govern the approval by the Secretary of the transfer, assignment or sale of rights granted under a permit issued pursuant to this Subchapter.

(b) Application for transfer, assignment or sale of rights shall be filed with the Regional Director.

(c) The Regional Director, before recommending to the Director approval or disapproval of an application for transfer, assignment or sale of rights, shall obtain the concurrence of the Bureau of Land Management and the Geological Survey.

(d) The Director may authorize the Regional Director to grant the application if the Secretary approves the transfer, assignment or sale.

(e) Approval of a transfer, assignment or sale of rights granted under a permit shall not be construed to constitute a transfer or assignment of leasehold interests. Leasehold interests may only be transferred or assigned in accordance with 43 CFR 3506.

§ 741.24 Revocation of permits.

(a) A permit to conduct surface mining and reclamation operations on Federal lands may be revoked by the Director in accordance with the procedures in 30 CFR 843.13.

(b) If a permit and right to mine under the Act are revoked, the Regional Director shall notify BLM and recommend that action be taken to cancel the Federal lease in accordance with the procedures in 43 CFR Subpart 3523.

PART 742—BONDS AND LIABILITY INSURANCE ON FEDERAL LANDS

Sec.
742.1 Scope.
742.4 Regional Director responsibilities.

742.5 Definitions.
742.11 Federal lease bonds.
742.12 Performance bonds.
742.13 Federal lessee protection bonds.
742.14 Amount and duration of performance bonds.
742.15 Form of bonds.
742.16 Terms and conditions of bonds.
742.17 Terms and conditions for liability insurance.
742.18 Release of bonds.
742.19 Performance bond, forfeiture criteria and procedures.

AUTHORITY: Secs. 102, 201, 507, 509, 519, 523, 715, Pub. L. 95-87, 91 Stat. 448, 449, 474, 479, 501, 510, 525 (30 U.S.C. 1207, 1211, 1257, 1259, 1269, 1273, 1305); and 41 Stat. 437, as amended (30 U.S.C. 181).

§ 742.1 Scope.

This Part sets forth, with respect to Federal lands, the requirements for the bond required for compliance with the terms and conditions of a coal lease, license or permit under the Mineral Leasing Act of 1920, as amended, and the performance and Federal lessee protection bond required under the Surface Mining Control and Reclamation Act of 1977. This Part also sets forth procedures for setting bond amounts, provides for reduction of bond requirements where dual bonding exists and requires bonding to ensure full compliance with the requirements for reclamation of surface coal mining and reclamation operations on Federal lands. This Part also sets forth the requirements for liability insurance for surface coal mining and reclamation operations on Federal lands.

§ 742.4 Regional Director responsibilities.

(a) The Director shall prescribe and furnish the form for filing a performance bond. The Regional Director shall also prescribe terms and conditions for bonds and insurance.

(b) The Director is responsible for determining the amount of the performance and Federal lessee protection bond required for each bonded area, including adjustments to the initial amount from time to time as affected land acreages are increased or decreased or where the cost of future reclamation changes.

(c) The Director is responsible for the release of performance bonds.

(d) The Director shall initiate proceedings for forfeiture of all or part of a bond consistent with 30 CFR 808.

§ 742.5 Definitions.

Federal lease bond means a surety bond payable to the United States required pursuant to 43 CFR 3504 for compliance with the terms and conditions of a Federal coal lease.

Federal lessee protection bond means a bond payable to the United States for use and benefit of a permittee or lessee on Federal lands to secure payment of any damages to crops or tangible improvements.

§ 742.11 Federal lease bonds.

(a) All operators on any Federal lease shall have a Federal lease bond pursuant to this Part. Lessees holding a lease before the effective date of these regulations where the lease is covered by a bond required under 43 CFR 3504, may apply to the authorized officer for release of liability for that portion of the Federal lease bond that covers reclamation requirements.

(b) The authorized officer may release the liability for that portion of the Federal lease bond that covers reclamation requirements if:

(1) The Federal lessee has secured a suitable bond covering the permit area under this part;

(2) There are no pending actions or unresolved claims against existing bonds; and

(3) The authorized officer receives concurrence from the Regional Director and the Mining Supervisor.

(c) Bonding requirements on Federal leases issued pursuant to 43 CFR 3500, after the effective date of these regulations shall not include the performance bond required in this Part.

§ 742.12 Performance bonds.

Each operator of a surface coal mining and reclamation operation on Federal leases shall comply with the performance bond requirements of 30 CFR 800-808. The provisions for self-insurance equivalency under 30 CFR 806.14(d) shall not apply to operations on Federal lands.

§ 742.13 Federal lessee protection bonds.

(a) In those instances where Federally owned coal is to be mined and the surface of the land is subject to a lease or permit issued by the United States and the applicant for a permit is unable to obtain the written consent of the permittee or lessee of the surface to enter and commence surface coal mining operations, the applicant shall submit to the Regional Director with his application a Federal lessee protection bond which meets the requirements of this Section. The Federal lessee protection bond is in addition to the performance bond required by Section 742.12.

(b) The bond shall be payable to the United States for the use and benefit of the permittee or lessee of the surface lands involved.

(c) The bond shall secure payment to the surface estate for any damage which the surface coal mining and reclamation operation causes to the crops, or to tangible improvements of the permittee or lessee of the surface lands.

(d) The amount of the bond shall be determined either by the parties involved or in an action brought against the operator or upon the bond in a court of competent jurisdiction.

§ 742.14 Amount and duration of performance bonds.

The amount and duration of the performance bond for surface mining and reclamation operations on Federal lands shall be in accordance with 30 CFR 805.

§ 742.15 Form of bonds.

The form of the performance bond shall be established by the Regional Director and may include—

(a) A bond executed by the applicant and a corporate surety licensed to do business in the State where the surface or underground coal mining operation is located; or

(b) Cash deposits, negotiable bonds of the United States or State, or negotiable certificates of deposit of any bank organized or transacting business in the United States, if the applicant so chooses.

§ 742.16 Terms and conditions of bonds.

(a) The bond shall be conditioned upon faithful performance of all the requirements of the Act, this Chapter and the permit and shall cover that area under permit upon which the operator will initiate and conduct surface coal mining and reclamation operations with the initial term of the permit in accordance with 30 CFR 806.

(b) The amount of the bond and the requirements for acceptance of a bond may be adjusted from time to time to meet the geological, hydrological and other requirements of additional acreage to be affected under the permit pursuant to the incremental expansion of the surface or underground coal mining and reclamation operation.

(c) Duration of the bond shall be determined under 30 CFR 805.13 and shall apply to each incremental expansion of the surface or underground coal mining operation as it comes under bond.

§ 742.17 Terms and conditions for liability insurance.

The terms and conditions for liability insurance in 30 CFR 806 shall apply to operations on Federal lands except the provisions for self-insurance equivalency in 30 CFR 806.14(d) shall not apply.

§ 742.18 Release of bonds.

(a) A Federal lease bond may be released by the authorized officer, upon satisfactory reclamation of a mine after cessation of operations as determined and approved by the Regional Director and the Mining Supervisor.

(b) A performance bond shall be released in accordance with 30 CFR 807, except as provided in this Part.

(c) A Federal lessee protection bond shall be released upon the written consent of the lessee or upon compliance with the requirements of 30 CFR 807.

§ 742.19 Performance bond forfeiture criteria and procedures.

The performance bond on Federal lands shall be subject to foreiture in accordance with 30 CFR 808.

PART 743—INSPECTIONS, ENFORCEMENT, AND CIVIL PENALTIES—FEDERAL LANDS

Sec.
743.1 Scope.
743.2 Objective.
743.4 Responsibilities.
743.11 General obligations.
743.12 Inspections.
743.13 Enforcement.

AUTHORITY: Secs. 102, 201, 517, 518, 521, 523, 525 of Pub. L. 95-87, 91 Stat. 448, 449, 498, 499, 504, 510, and 511 (30 U.S.C. 1202, 1211, 1267, 1268, 1271, 1273, 1275); and 41 Stat. 437, as amended (30 U.S.C. 181).

§ 743.1 Scope.

This Part applies to inspection of surface coal mining and reclamation operations, enforcement of applicable laws and regulations, and assessment of civil penalties on Federal lands.

§ 743.2 Objective.

The objective of this Part is to establish procedures for inspection, enforcement, and assessment of civil penalties by the Office of Surface Mining and other agencies.

§ 743.4 Responsibilities.

(a) The Regional Director is responsible for the inspection and enforcement of all coal exploration within the permit area and surface coal mining and reclamation operations on Federal lands to ensure compliance with all applicable performance standards and requirements of the approved exploration or mining permit and all terms, conditions, and stipulations of a lease, license, or permit issued under the Mineral Leasing Act of 1920 that are incorporated into an approved exploration or mining permit except as provided in paragraphs (b), (c) and (d) of this Section.

(b) The authorized State regulatory authority shall assume the inspection and enforcement functions of the Regional Director that are included in the provisions of a State-Federal cooperative agreement under 30 CFR 745.

(c) The Mining Supervisor is responsible for inspection and enforcement on Federal lands to ensure operator compliance with lease and license terms, conditions, and stipulations and with provisions of an approved exploration or mining permit relating to development, production, and resource recovery, including royalty audits and other non-field inspections.

(d) The authorized officer of the surface managing agency shall inspect leases and permit areas for compliance with terms, conditions, and stipulations relating to the management and protection of non-coal Federal material resources and the post-mining use of affected lands.

§ 743.11 General obligations.

(a) *Right of entry.* The operator shall provide access and means for any authorized representative of the Regional Director, the Mining Supervisor or the authorized officer of the surface managing agency to inspect the surface coal mining and reclamation operation without advance notice to determine whether the operation is in compliance with all applicable laws, regulations, notices and orders, terms and conditions of the lease, permit or license, and the requirements of the approved mining plan.

(b) *Records and Equipment.* Any authorized representative of the Regional Director or the Mining Supervisor may, at reasonable times and without delay, have access to copy any records and to inspect any monitoring equipment or method of operation required under the regulations or an approved mining plan.

(c) *Citizen Request.* The operator shall at all reasonable times allow any authorized representative of the Regional Director to inspect or investigate the operation in response to a citizens request pursuant to 30 CFR 842.12.

§ 743.12 Inspections.

(a) Coal exploration and surface coal mining and reclamation operations on Federal lands shall be inspected under provisions of Part 840 and 842 of this Chapter and in accordance with the responsibilities in Section 743.4. Inspections shall be conducted jointly when more than one agency is involved and it is practical to do so. The Regional Director may enlist the aid of other Federal inspectors when necessary to ensure compliance with an approved exploration or mining permit.

(b)(1) The Regional Director shall coordinate inspections by Federal agencies. When the Mining Supervisor or the authorized officer of the surface managing agency determines that an inspection should be made, they shall notify the Regional Director. To the extent possible, inspections by other Federal agencies shall be scheduled concurrently with inspections by the Office. Royalty audits and other non-field inspection by the Mining Supervisor need not be coordinated with the Regional Director.

(2) The Regional Director shall conduct at least one partial inspection per month and one complete inspection per calendar quarter of each surface coal mining and reclamation operation under his jurisdiction.

(c) The inspections required under this Section shall:

(1) Be carried out on an irregular basis;

(2) Occur without prior notice to the person being inspected or any agent or employee of such person, except for necessary onsite meetings; and

(3) Include the prompt filing of inspection reports adequate to enforce the requirements of this Chapter.

§ 743.13 Enforcement.

(a) The provisions of 30 CFR 843 shall govern actions by the Regional Director to ensure compliance with an approved mining permit and all terms, conditions, and stipulations of a lease, license, or permit issued under the Mineral Leasing Act of 1920, as amended, that are incorporated into such permit.

(b) The Mining Supervisor shall take necessary action to ensure compliance with 30 CFR 211 for exploration outside the permit area, coal development, production and resource recovery.

(c) *Civil penalties.* Civil penalties for the violation of provisions of the Surface Mining Control and Reclamation Act and regulations under the Act shall be assessed by the Regional Director in accordance with 30 CFR 845.

PART 744—PERFORMANCE STANDARDS FOR FEDERAL LANDS

Sec.
744.1 Scope.
744.11 Performance standards: Exploration.
744.12 Performance standards: Mining and reclamation.
744.13 Performance standards: Completion of operations and abandonment.

AUTHORITY: Secs. 102, 201, 508, 515, 516, 517, 519, 523, 701, 717 and 719 of Pub. L. 95-87, 91 Stat. 448, 449, 486, 495, 498, 501, 510, 516, 526 (30 U.S.C. 1202, 1211, 1258, 1265, 1266, 1267, 1269, 1273, 1301, 1307, and 1309); and 41 Stat. 437, as amended (30 U.S.C. 181).

§ 744.1 Scope.

These regulations govern the conduct of all surface coal mining and reclamation operations on Federal lands, regardless of surface ownership.

§ 744.11 Performance standards: Exploration.

(a) Coal exploration activities on Federal lands within a permit area shall be conducted pursuant to the re-

quirements of the permit and the following additional requirements.

(1) *Surveillance wells.* With the approval of the Regional Director, in consultation with the Mining Supervisor, drill holes may be utilized as surveillance wells for the purpose of monitoring the effect of subsequent operations upon the quantity, quality, or pressure of ground water or mine gases.

(2) *Blowout control devices.* When drilling on lands that are valuable or potentially valuable for oil and gas or geothermal resources, the operator shall, when required by the Regional Director, in consultation with the Mining Supervisor, set and cement casing in the hole and install suitable blowout prevention equipment.

(3) *Use of wells by others.* Upon receipt of a written request from the surface owner or the appropriate authorized officer, the Regional Director, in consultation with the Mining Supervisor, may approve the transfer of an exploratory well for further use as a water well. Approval of the well transfer shall be accompanied by a corresponding transfer of responsibility for any liability for damage and eventual plugging. Nothing in this paragraph shall supersede or affect the applicability of any State law requirements with respect to that transfer.

§ 744.12 Performance standards: Mining and reclamation.

(a) All surface coal mining and reclamation on Federal lands shall be conducted pursuant to the performance standards in 30 CFR Subchapter K and any terms and conditions of the lease license or permit.

(b) The operator shall conduct surface coal mining and reclamation operations to maximize the utilization and conservation of the solid fuel resources being recovered so that reaffecting the land in the future through surface coal mining can be minimized; provided that the requirements of the Mineral Leasing Act of 1920, as amended, for maximum economic recovery and diligent development are not diminished by this requirement.

(c) When mining is conducted in areas of known wells or boreholes that may liberate oil, gas, water or other fluid substances, the operator shall promptly notify the Mining Supervisor upon encountering unsuspected wells or bore holes and take no further actions which would disturb the wells or bore holes without the Mining Supervisor's prior approval. To the extent practicable, the Mining Supervisor shall consult with the Regional Director prior to continuation of operations.

§ 744.13 Performance standards: Completion of operations and abandonment.

(a) *Temporary abandonment.* In areas in which there are no current operations, but operations are to be resumed under an approved plan, the operator shall substantially backfill, fence, protect, or otherwise effectively close all surface openings, auger holes, areas prone to subsidence, and surface facilities or workings which are a hazard to people or animals. The operator shall post conspicuous signs prohibiting entrance of unauthorized persons. All such protective measures shall be maintained in a secure condition until the operations are resumed or permanently abandoned.

(b) *Permanent abandonment.*

(1) Before permanent abandonment of exploration or mining operations, all openings and excavations, including water discharge points, shall be closed, backfilled, or otherwise permanently sealed and stabilized in accordance with sound engineering practices and according to the approved plan. Drill holes, trenches, and other excavations for exploration, development, or prospecting shall be abandoned in a manner that protects the surface and not to endanger any present or future underground operations or any deposit of oil, gas, other mineral resources, or ground water.

(2) Methods of abandonment shall be approved in advance by the Regional Director in an approved plan, and may include backfilling, regrading, revegetating, cementing, and capped casing, or combinations of these, or other methods. Reclamation and clean-up of permanently abandoned underground or surface mining operations shall commence without delay following cessation of mining operations. Areas affected by access roads shall be graded, drained, and revegetated in accordance with the approved mining plan and the approved post-mining land use prior to bond release. In the event that access or haul roads are intended to remain after abandonment of the operation, they shall be designed and constructed to be permanently stabilized, using adequate drains, water barriers, and other practices.

(c) *Notice of abandonment.*

(1) Not less than 30 days prior to cessation or abandonment of operations, the operator shall submit to the Regional Director, in duplicate, a notice of his intention to cease or abandon operations, with a statement of the exact number of acres affected by his operation, the extent and kind of reclamation accomplished, and a statement as to the structures and other facilities that are to be removed from or remain on the leased, permitted, or licensed lands.

(2) Upon receipt of this notice the Regional Director, the Mining Supervisor and the appropriate authorized officer shall promptly make a joint inspection to determine whether all operations have been completed in accordance with the terms and conditions of all leases, permits, or licenses, and with the requirements of the approved mining plan. Where the operator has complied with all such terms, conditions and requirements, and the regulations of this Part, the Regional Director shall recommend to the appropriate authorized officer that the appropriate liability of the lease bond be terminated.

(d) *Surface owner participation.* When the surface of lands in a lease, permit, or license is not owned by the United States, the Regional Director shall notify the surface owner and solicit and take into account his comments before recommending to the appropriate authorized officer that the appropriate bond liability be terminated.

(e) *Public participation.* Prior to approval of final abandonment the Regional Director shall comply with the public participation requirements of 30 CFR 807.

PART 745—STATE-FEDERAL COOPERATIVE AGREEMENTS

Sec.
745.1 Scope.
745.2 Objectives.
745.4 Responsibilities.
745.11 Application and agreement.
745.12 Terms.
745.13 Authority reserved by the Secretary.
745.14 Enforcement.
745.15 Amendments.
745.16 Termination.
745.17 Reinstatement.
745.18 State actions under agreements.

AUTHORITY: Secs. 102, 201, 503, 507, 517, 518, 521, and 523 of Pub. L. 95-87, 91 Stat. 448, 449, 470, 474, 498, 499, 504, and 510 (30 U.S.C. 1202, 1211, 1253, 1257, 1267, 1268, 1271, 1273); and 41 Stat. 437, as amended (30 U.S.C. 181).

§ 745.1 Scope.

This part sets forth procedures for the formulation and administration of cooperative agreements under Section 523(a) of the Act, describes provisions which must be included in the agreements, establishes criteria for approval of agreements, and lists authorities and responsibilities reserved to the Secretary.

§ 745.2 Objective.

The objective of this part is to provide for the uniform application of environmental and reclamation standards to surface coal mining operations located within a State through the exercise of regulatory authority by

States with approved State programs over surface coal mining operations on Federal lands.

§ 745.4 Responsibilities.

(a) The Secretary is responsible for entering into, revising and terminating cooperative agreements upon request of the State, and for the approval of mining plans on Federal lands.

(b) The Regional Director is responsible for recommending approval or disapproval of cooperative agreements to the Director.

(c) The Director is responsible for recommending approval or disapproval to the Secretary.

§ 745.11 Application and agreement.

(a) The Governor of any State may request that the Secretary enter into a cooperative agreement with the State, if the State has an approved State program or has submitted a program for approval under 30 CFR 731, and has within its borders surface coal mining operations which are being conducted under the terms of a Federal lease.

(b) A request for a cooperative agreement shall be submitted to the Director in writing and, unless previously submitted in the State program plan, shall include the following information:

(1) A copy of the budget of the State regulatory authority;

(2) A summary of the history of the State regulatory authority and a description of its powers and responsibilities other than over surface coal mining and the proportion of its staff assigned to duties not relating to surface coal mining;

(3) The best available figures with respect to the total area of non-Federal surface mineable coal within the State, the number and extent of existing surface coal mining operations, and the expected number and extent of surface coal operations on Federal and non-Federal lands;

(4) An organization chart and description of the staff of the State regulatory authority which states the number and types of technical and professional personnel available for administration of the cooperative agreement, and their disciplines, salaries or the amount reimbursed to other agencies for their services;

(5) A description of the procedures which the State proposes to follow in enforcing its environmental and reclamation standards on Federal lands and a statement of the number of employees listed in paragraph (b)(4) of this section who will be available for such enforcement and the proportion of their time which will be available;

(6) A description of the administrative and backup staff of the State regulatory authority available for enforcement on Federal lands;

(7) A description of the physical facilities of the State regulatory authority available for enforcement on Federal lands including office space, vehicles, laboratory and testing equipment, the cost associated with such facilities;

(8) Proposed terms of the agreement consistent with the requirements of this part; and

(9) A certification by the Attorney General of the State that no statutory, regulatory or policy provisions exist which would limit the capability of the State regulatory authority to fully comply with the requirements of this part and of the proposed cooperative agreement.

(c) The Director shall publish a notice of the request and the terms of the proposed agreement in the FEDERAL REGISTER as proposed rules, and in newspapers of general circulation throughout the State. The notice shall also include:

(1) The date, time and place of the public meeting(s) on the request to be held in compliance with paragraph (d) of this section;

(2) The location of each office of the State regulatory authority and the name of the person in that office from whom a complete copy of the request submitted by the State may be obtained; and

(3) A date not less than 60 days after publication of the notice within which members of the public may submit written comments on the request and the person to whom comments should be addressed;

(d) Not less than 30 days after publication of the notice required in paragraph (c) of this section, a public meeting shall be held in a suitable location in the State requesting the cooperative agreement. This meeting may be combined with public meetings required under 30 CFR 732, if appropriate.

(e) Before the expiration of the comment period, the Director shall consult with the Bureau of Land Management, Fish and Wildlife Service, the U.S. Geological Survey, and other Federal surface managing agencies to obtain their views on the request.

(f) The Director shall recommend to the Secretary that he enter into a cooperative agreement with a State if the Director finds that:

(1) The State has an approved State program.

(2) The State regulatory authority has sufficient budget, equipment and personnel to fully enforce the State's environmental and reclamation standards on all surface mining operations on Federal lands in the State.

(3) The State has the legal authority to administer the cooperative agreement.

(4) The State will cooperate with the Office of Surface Mining, the U.S. Geological Survey and the surface managing agencies in the administration of their responsibilities with respect to surface coal mining operations on Federal lands.

(g) The Secretary shall publish in the FEDERAL REGISTER his decision with respect to a request by a State to enter into a cooperative agreement and the reasons therefor. If he enters into a cooperative agreement, the Secretary shall publish the final terms of the agreement in the FEDERAL REGISTER.

§ 745.12 Terms.

Each cooperative agreement shall include:

(a) Terms obligating the State regulatory authority to enforce the environmental and reclamation standards of the State's approved program on Federal lands and describing each applicable provision of the State's statutes, regulations and policies;

(b) A description of the powers and authority reserved by the Secretary under section 745.13;

(c) A description of the procedures and reasons for modification, suspension or termination of the agreement under the requirements of this Part;

(d) Provisions for reports by the State regulatory authority to the Regional Director;

(e) Terms obligating the State regulatory authority to maintain sufficient personnel and facilities to comply with the terms of the agreement, and to notify the Regional Director of any substantial change in State law, regulations, funding, staff and any other change which would affect the State's ability to administer the cooperative agreement; and

(f) Terms for cooperation among the State regulatory authority, the surface managing agencies, the U.S. Geological Survey and the Office of Surface Mining.

§ 745.13 Authority reserved by the Secretary.

The Secretary shall not delegate to any State, nor shall any cooperative agreement be construed to delegate to any State, authority over or responsibility for—

(a) The designation of Federal lands unsuitable for surface coal mining;

(b) The preparation of environmental impact statements or assessments;

(c) The development of land use management plans;

(d) The regulation of non-coal mining activities on Federal lands;

(e) The determination of when, where and how to lease Federal coal and how much to lease;

(f) The development of the terms for Federal coal leases, including special

terms relating to mining and reclamation procedures;

(g) The evaluation of the coal resource;

(h) Royalties, rents, and bonuses charged in connection with Federal coal leases;

(i) The approval or significant modification of any mine plans on Federal lands;

(j) The enforcement of lease terms, including diligent development and maximum economic recovery requirements;

(k) Approval of post-mining land use plans for Federal lands; and

(l) The release of Federal lease bonds.

§ 745.14 Enforcement.

The State regulatory authority shall inspect and enforce consistent with the provisions of 30 CFR 840-845, and the requirements of the State program on Federal lands leased for coal under the Mineral Leasing Act of 1920 as amended, and pursuant to an approved State-Federal cooperative agreement and the requirements of this Part.

§ 745.15 Amendments.

A cooperative agreement may be amended by mutual agreement of the Secretary and the Governor of a State. Amendments shall be adopted by rulemaking.

§ 745.16 Termination.

(a) *Termination by the State.* A cooperative agreement may be terminated by the State upon written notice to the Secretary, specifying the date upon which the cooperative agreement shall be terminated. The date of termination shall not be less than 90 days from the date of the notice.

(b) *Termination by the Secretary.* A cooperative agreement may be terminated by the Secretary after giving notice to the State regulatory authority and affording the State regulatory authority an opportunity for a meeting in accordance with section 745.11 if the Secretary finds that:

(1) The State regulatory authority has substantially failed to comply with the regulations of this Part or provisions of the cooperative agreement; or

(2) The State regulatory authority has failed to comply with any assurance given by the State upon which approval of the cooperative agreement or grants are based.

(c) *Termination by operation of law.* Any cooperative agreement shall terminate—

(1) When no longer authorized by Federal law or the State laws and regulations; or

(2) Upon termination of a State program.

§ 745.17 Reinstatement.

(a) A State may apply for reinstatement of the cooperative agreement upon providing written evidence that the State has remedied all defects for which the agreement was terminated and is fully capable of complying with the requirements of the cooperative agreement. Any reinstatement shall be by rulemaking.

(b) The Director may recommend approval of the reinstatement to the Secretary if he finds that the State meets all the requirements for the initial approval of a cooperative agreement pursuant to this subchapter.

§ 745.18 State actions under agreements.

This section sets forth the procedures to be followed by the State regulatory authority in the administration of a cooperative agreement.

(a) *Fees.*

(1) Each permit application on Federal lands shall be accompanied by a permit fee to be determined in accordance with 30 CFR 741.12. Annual fees may be assessed consistent with the State program. The fees may be less than, but shall not exceed, the actual or anticipated costs of reviewing the permit application and administering and enforcing the permit.

(2) All permit fees collected shall be retained by the State. The State shall submit reports to the Regional Director on fees collected on Federal lands containing the information and at the times required by the Regional Director.

(b) *Copies of permit application.* The applicant shall file the number of copies required by the regulatory authority and seven (7) copies with the Regional Director. The required copies shall be filed simultaneously and be identical in all particulars.

(c) *Civil penalties.* Assessment of civil penalties on surface coal mining operations conducted on Federal lands shall be determined by the procedures set forth in the cooperative agreement.

SUBCHAPTER F—AREAS UNSUITABLE FOR MINING

PART 760—GENERAL

Sec.
760.1 Scope.
760.2 Objectives.
760.3 Authority.
760.4 Responsibility.

AUTHORITY: Sections 102, 201, 501(b), 510, 522, and 523, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, 1260, 1272, and 1273).

§ 760.1 Scope.

This subchapter establishes procedures for implementing the requirements of the Act for designating lands unsuitable for all or certain types of surface coal mining operations and for terminating such designations.

§ 760.2 Objectives.

The objectives of this subchapter are to establish—

(a) Procedures for consideration of petitions for the designation of lands as unsuitable for all or certain types of surface coal mining operations, for the termination of these designations, and for public participation in the petition proceedings;

(b) The minimum standards for obtaining, maintaining and analyzing information on the effects of coal development in areas covered by a petition in light of other potential uses and activities;

(c) Procedures for identifying lands on which mining is prohibited or limited by Section 522(e) of the Act; and

(d) Criteria for determining if an area should be designated as unsuitable for all or certain types of surface coal mining operations.

§ 760.3 Authority.

(a) Each State regulatory authority is authorized, under Sections 522 (a) and (c) of the Act, to establish a data base and inventory system and a petition process to designate any non-Federal and non-Indian land areas of the State that are unsuitable for all or certain types of surface coal mining operations.

(b) The Secretary is authorized, under Sections 522(b) and (c) of the Act,—

(1) Conduct a review of Federal lands to determine whether any area on Federal lands is unsuitable for all or certain types of surface coal mining operations;

(2) Establish a process for the public to petition to have an area on Federal lands designated as unsuitable for all or certain types of surface coal mining operations.

(3) Implement, as part of a Federal program for a State, a process for designation of areas unsuitable for surface coal mining operations on non-Federal lands within a State.

§ 760.4 Responsibility.

Section 522 of the Act requires that:

(a) The Secretary shall conduct a review of Federal coal lands to determine whether there are areas which are unsuitable for surface coal mining operations;

(b) In order to be eligible to assume primary regulatory authority, a State shall establish a process that includes a data base and inventory system for designating lands unsuitable for surface coal mining operations which shall be available to the public;

(c) The regulatory authority shall integrate as closely as possible deci-

sions to designate lands as unsuitable for surface coal mining with present and future land-use planning and regulation processes at the Federal, State, and local levels;

(d) The regulatory authority shall establish a petition process that allows any person having an interest which is or may be adversely affected to petition to have an area designated as unsuitable for surface coal mining operations, or to have the designation terminated;

(e) The regulatory authority shall prohibit or limit surface coal mining operations mining on certain lands and in certain locations designated by Congress in Section 522(e) of the Act;

(f) A person with an interest which is or may be adversely affected may petition the regulatory authority to have an area designated unsuitable for surface coal mining operations, or to have such a designation terminated.

PART 761—AREAS DESIGNATED BY ACT OF CONGRESS

Sec.
761.1 Scope.
761.2 Objectives.
761.3 Authority.
761.4 Responsibility.
761.5 Definitions.
761.11 Areas where mining is prohibited.
761.12 Procedures.

AUTHORITY: Sections 102, 201, 501(b), and 522, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, and 1272).

§ 761.1 Scope.

This part establishes the procedures to be followed in determining whether a proposed surface coal mining operation can be permitted in light of the prohibitions and limitations in section 522(e) of the Act for those operations on certain Federal, public and private lands.

§ 761.2 Objectives.

The objectives of this part are to implement the prohibitions and limitations of surface coal mining operations on certain Federal, public and private lands under section 522(e) of the Act.

§ 761.3 Authority.

The State regulatory authority or the Secretary under section 522(e) of the Act, is authorized to prohibit or limit surface coal mining operations on certain Federal, public and private lands except for those operations which existed on August 3, 1977, or were subject to valid existing rights on that date.

§ 761.4 Responsibility.

(a) The Secretary shall—

(1) Determine whether any application for a permit for surface coal mining operations on Federal lands, must be denied because such operations on those lands are prohibited or limited by section 522(e) of the Act;

(2) Determine whether an applicant for a permit covering Federal lands either—

(i) Had any valid existing rights on August 3, 1977; or

(ii) Was conducting an existing surface coal mining operation on those lands on August 3, 1977.

(3) Withdraw lands designated unsuitable for all or certain types of surface coal mining operations from leasing.

(b) The State regulatory authority shall—

(1) Meet the requirements of this part and subchapter G on reviewing applications for permits; and

(2) Determine whether an application must be denied because surface coal mining operations on those lands are prohibited or limited by section 522(e) of the Act and whether an applicant for a permit covering such lands either had any valid existing rights on August 3, 1977, or was conducting a surface coal mining operation on those lands within a prohibited area on August 3, 1977.

(c) The Director shall determine—

(1) Whether any application for a permit for surface coal mining operations on non-Federal lands where a Federal program for a State has been implemented must be denied because the operations on those lands are prohibited or limited by section 522(e) of the act; and

(2) Whether an applicant for a permit covering non-Federal lands, where a Federal program for a State has been implemented, either had any valid existing rights on August 3, 1977, or was conducting an existing surface coal mining operation on those lands on August 3, 1977.

§ 761.5 Definitions.

For the purposes of this Part—

Valid existing rights means:

(a) In relation to those lands specified in Sections 552(e) (1) and (2) of the act, valid existing rights means those property rights in existence on August 3, 1977, that were created by a legally binding conveyance, lease, deed, contract or other document which expressly authorizes the applicant to produce coal by surface coal mining operations and the exercise of such rights cannot, under applicable State or Federal law, be conditioned or denied in the manner provided in this part. Interpretation of the terms of the document will be based upon the usage and custom at the time and place where it came into existence and upon a showing by the applicant that the parties to the document actually contemplated a right to conduct the same underground or surface mining activities for which the applicant claims a valid existing right; or

(b) In relation to those lands specified in § 761.11 (c), (d), (e), (f), and (g), valid existing rights means that, on or before August 3, 1977, the person proposing to conduct surface coal mining operations on such lands had been validly issued all State and Federal permits necessary to conduct such operations on those lands.

(c) A mere expectation of a right to conduct surface coal mining operations or the right to conduct underground coal mining does not qualify as a valid existing right to conduct surface mining activities. Examples of rights which along do not constitute valid existing rights include coal exploration permits or licenses, and applications or bids for leases and prospecting permits, and situations where an operator has only applied for a State or Federal permit or has received a permit but its issuance has been stayed and not subsequently affirmed by an administrative or judicial review body.

No significant recreational, timber, economic or other values incompatible with surface coal mining operations means the land included in the permit application or off-site land to be affected by the operations does not have any appreciable, measurable or noteworthy uses, which would be disturbed, hampered, destroyed or eliminated by the impacts of surface coal mining operations and related activities, for—

(a) Recreation, including hiking, boating, camping, skiing or other outdoor activities;

(b) Timber management and silviculture;

(c) Agriculture, aquaculture, or production of other natural, processed or manufactured products which enter commerce;

(d) Scenic, historic, archeologic, esthetic, fish, wildlife or cultural interests.

Surface operations and impacts incident to an underground coal mine means all activities involved in or related to underground coal mining which are either conducted on the surface of the land, produce changes in the land surface or disturb the surface, air or water resources of the area, including all activities listed in section 701(28) of the Act and § 700.5 of this chapter.

Significant forest cover means an existing plant community consisting predominantly of trees and other woody vegetation. The Secretary of Agriculture shall decide on a case-by-case basis whether the forest cover is significant within those national forests west of the 100th meridian.

Occupied dwelling means any building that is currently being used on a

regular or temporary basis, for human habitation.

Public building means any structure that is owned by a public agency or used for public business, meetings or other group gatherings.

Community or institutional building means any structure other than a public building which is used for meetings, gatherings or functions of local civic organizations or other community groups, or functions as an educational, cultural, historic, religious, scientific, correctional, mental-health or physical health care facility; or is used for public services including but not limited to water supply, power generation or sewage treatment.

Surface coal mining operations which exist on the date of enactment means all surface coal mining operations which were being conducted on August 3, 1977.

Public park means an area adopted, dedicated or designated by any Federal, State, or local agency for public recreational use whether or not such use is limited to certain times or days, including any land leased, reserved or held open to the public because of that use.

Public road means any thoroughfare open to the public for passage of vehicles or pedestrians, regardless of whether it is maintained by any Federal, State or local agency.

Cemetery means any area of land where human bodies are interred.

§ 761.11 Areas where mining is prohibited or limited

Subject to valid existing rights on August 3, 1977, or unless surface coal mining operations existed on that date, no surface coal mining operations shall be conducted after August 3, 1977:

(a) On any lands within the boundaries of the National Park System, the National Wildlife Refuge System, the National System of Trails, the National Wilderness Preservation System, the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act, and National Recreation Areas designated by Act of Congress.

(b) On any Federal lands within the boundaries of any national forest; *provided, however,* that surface coal mining operations may be permitted on such lands, if the Secretary finds that there are no significant recreational, timber, economic, or other values which may be incompatible with such surface mining operations; and

(1) Surface operations and impacts are incident to an underground coal mine; or

(2) The Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those national forests west of the 100th meridian, that surface coal mining operations comply with the Multiple-Use Sustained Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1975, and the National Forest Management Act of 1976, and the provisions of the Act; *and provided further,* that no surface coal mining operation may be permitted within the boundaries of the Custer National Forest;

(c) Which will adversely affect any public park or any places included on, or eligible for listing in, the National Register of Historic Places, unless approved jointly by the regulatory authority and the Federal, State or local agency with jurisdiction over such park or places after they have jointly determined that:

(1) There is no feasible or prudent alternative to the proposed surface coal mining operation,

(2) The operation includes all possible actions to minimize harm to such park or places from the proposed surface coal mining operation;

(3) The need for the coal outweighs the need for such park or places.

(d) Within 100 feet of the outside right-of-way line of any public road, except:

(1) Where mine access roads or haulage roads join such right-of-way line; or

(2) Where the regulatory authority allows the public road to be relocated or the area affected to be within 100 feet of such road, after

(i) Public notice and opportunity for a public hearing in accordance with § 778.14(d) of this chapter, and

(ii) Making a written finding that the interests of the affected public and landowners will be protected;

(e) Within 300 horizontal feet from any occupied dwelling, unless the owner thereof has provided a written waiver consenting to surface coal mining operations closer than 300 feet;

(f) Within 300 horizontal feet of any public building, school, church, community or institutional building or public park; or

(g) Within 100 horizontal feet of a cemetery.

§ 761.12 Procedures.

(a) Upon receipt of a complete application for a surface coal mining operation permit, the regulatory authority shall review the application to determine whether surface coal mining operations are limited or prohibited under § 761.11 on the lands which would be disturbed by the proposed operation.

(b)(1) Where the proposed operation would be located on any lands listed in §§ 761.11 (a), (f) or (g), the regulatory authority shall reject the application if the applicant has no valid existing rights or if the operation did not exist on August 3, 1977.

(2) If there is any question about whether the proposed operation is located within the boundaries of any of the lands in § 761.11(a) or closer than the limits provided in § 761.11 (f) and (g), the regulatory authority shall transmit a copy of the relevant portions of the permit application to the appropriate Federal, State or local government agency for a determination or clarification of the relevant boundaries or distances, with a notice to the appropriate agency that it must respond within 30 days from receipt of the request.

(c) Where the proposed operation is on Federal lands within the boundaries of any national forest, and the applicant seeks a determination that mining is permissible under § 761.11(b) of this part, the regulatory authority shall transmit a copy of the completed application to the Director, who shall make the determination. Before acting on such permit application, the regulatory authority shall insure that the Director's determination has been received and the findings required by section 522(e)(2) (A) or (B) of the Act have been made.

(d) Where the proposed mining operation is to be conducted within 100 feet of the outside right-of-way line of any public road (except where mine access roads or haulage roads join such right-of-way line) or where the applicant proposes to relocate any public road, the regulatory authority shall—

(1) Require the applicant to obtain the approval of the authority with jurisdiction over the public road to conduct a mining operation within 100 feet of the outside right-of-way line of the public road;

(2) Provide notice in a newspaper of general circulation in the affected locale of a public hearing at least 2 weeks before the hearing;

(3) Provide an opportunity for a fact-finding public hearing at which any member of the public may participate in the locality of the proposed mining operations for the purpose of determining whether the interests of the public and affected landowners will be protected; and

(4) Make a written finding based upon information received at the public hearing within 10 days after completion of the hearing as to whether the interests of the public and affected landowners will be protected from the proposed mining operations.

(e) Where the proposed surface coal mining operations would be conducted within 300 feet of any occupied dwelling, the applicant shall submit with the application a written waiver of the owner and occupant of the dwelling, consenting to such operations within a

closer distance of the dwelling as specified in the waiver. The waiver must be separate from a lease or deed and must be given knowingly. The applicant must reveal to the regulatory authority all consideration given for the waiver.

(f) Where the proposed surface coal mining operation may adversely affect any public park or any places included on, or eligible for listing in, the National Register of Historic Places, the regulatory authority shall transmit to the Federal, State or local agencies with jurisdiction over or interest in the park or historic place a copy of the completed permit application containing the following:

(1) A request for that agency's approval or disapproval of the operations;

(2) The determinations required in § 761.11(c) and a statement of reasons therefore; and

(3) A notice to the appropriate agency that it must respond within 30 days from receipt of the request. A permit for the operation shall not be issued unless jointly approved by all affected agencies.

(g) If the regulatory authority determines that the proposed surface coal mining operation is not prohibited under section 522(e) of the Act and this part, it may nevertheless designate such lands as unsuitable for all or certain types of surface coal mining operations pursuant to parts 762, 764, 765 or 769.

(h) A determination of a State regulatory authority that a person holds or does not hold a valid existing right, as defined in § 761.5, or operations existing on the date of enactment, as defined in § 761.5, shall be subject to judicial review by a court of competent jurisdiction in accordance with State law, as required by section 526(e) of the Act. A determination of these issues by the Director concerning any Federal lands or under a Federal program for a State shall be subject to judicial review under section 526(a)(2) of the Act.

PART 762—CRITERIA FOR DESIGNATING AREAS AS UNSUITABLE FOR SURFACE COAL MINING OPERATIONS

Sec.

762.1 Scope.
762.4 Responsibility.
762.5 Definitions.
762.11 Criteria for designating lands as unsuitable.
762.12 Additional criteria.
762.13 Land exempt from designation as unsuitable for surface coal mining operations.
762.14 Exploration of land designated as unsuitable for surface coal mining operations.

AUTHORITY. Sections 102, 201, 501(b), 503, 504, 512, and 522 of Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1201, 1211, 1251, 1253, 1254, 1262, and 1272).

§ 762.1 Scope.

This part establishes the minimum criteria to be used in determining whether lands should be designated as unsuitable for all or certain types of surface coal mining operations.

§ 762.4 Responsibility.

The regulatory authority shall use the criteria in this part for the evaluation of each petition for the designation of areas as unsuitable for surface coal mining operations.

§ 762.5 Definitions.

For purposes of this Part:

Fragile lands means geographic areas containing natural, ecologic, scientific or esthetic resources that could be damaged or destroyed by surface coal mining operations. Examples of fragile lands include valuable habitats for fish, wildlife, and other environmental values, critical habitats for endangered or threatened species of animals or plants, uncommon geologic formations, areas where mining may cause flooding environmental corridors containing a concentration of ecologic and esthetic features, areas of recreational value due to high environmental quality and buffer zones adjacent to the boundaries of areas where surface coal mining operations are prohibited under Section 522(e) of the Act and Part 761 of this Subchapter.

Historic lands means historic or cultural districts, places, structures or objects, including archeological and paleontological sites, natural historic landmark sites, sites listed in or eligible for listing in a State or National Register of Historic Places, sites having religious or cultural significance to Indian tribes or sites for which historic designation is pending.

Natural hazard lands means areas subject to such natural hazards as landslides, cave-ins, subsidence, large or encroaching sand dunes, severe wind or soil erosion, or frequent flooding, and areas of unstable geology.

Renewable resource lands means aquifers and areas for the recharge of aquifers and other underground waters, areas for agricultural or silvicultural production of food and fiber, grazing lands and areas for the yield of game and commercial or sport fish and other forms of aquaculture.

Substantial legal and financial commitments in a surface coal mining operation means major investments of money in power plants, railroads, coal-handling or storage facilities and other capital intensive improvements and fixed equipment made on the basis of long-term, legally enforceable coal sales contracts which cannot be cancelled except upon payment of a substantial penalty. Investments are "major" if they are substantial both (a) in relationship to the aggregate assets of the proposed operator and the operator's beneficial owners, other than non-controlling shareholders in publicly held corporations, and (b) in relation to the aggregate capital expenditures which reasonably can be anticipated to be made for capital improvements and fixed equipment at the mine site to, and including, completion of all reclamation operations. Costs of the acquisition of the coal in place or of the right to mine it do not constitute "substantial legal and financial commitments."

§ 762.11 Criteria for designating lands as unsuitable.

(a) An area shall be designated as unsuitable for all or certain types of surface coal mining operations if the regulatory authority determines that reclamation is not technologically and economically feasible under the requirements of the Act, the regulations of this Chapter or an approved State program.

(b) An area may be designated as unsuitable for all or certain types of surface coal mining operations if the operations will—

(1) Be incompatible with existing State or local land use plans or programs;

(2) Affect fragile or historic lands in which the operations could result in significant damage to important historic, cultural, ecologic, scientific, or esthetic values or natural systems;

(3) Affect renewable resource lands in which the operations could result in a substantial loss or reduction of long-range productivity of water supply or of food or fiber products; or

(4) Affect natural hazard lands in which the operations could substantially endanger life and property.

§ 762.12 Additional criteria.

The State regulatory authority and the Secretary may establish more stringent criteria for determining whether lands under their jurisdiction should be designated as unsuitable for surface coal mining operations.

§ 762.13 Land exempt from designation as unsuitable for surface coal mining operations.

(a) The requirements of this Part shall not apply to—

(1) Lands on which surface coal mining operations were being conducted on August 3, 1977, as defined in 30 CFR 761-(5);

(2) Lands under a permit issued pursuant to the Act; or

(3) Lands where substantial legal and financial commitments in surface coal mining operations were in existence prior to January 4, 1977.

(b) When the operator to whom the exemption applies no longer controls the rights to the land, any exemptions from designations of unsuitability no longer apply.

§ 762.14 Exploration on land designated as unsuitable for surface coal mining operations.

(a) Designation of any area as unsuitable for all or certain types of surface coal mining operations pursuant to Section 522 of the Act and regulations of this Subchapter does not prohibit the mineral exploration of the area in accordance with provisions of the Act, the regulations issued under the Act, any approved State of Federal program, and other applicable requirements. Exploration on any lands designated unsuitable for surface coal mining operations must be approved by a State regulatory authority pursuant to Part 30 CFR 776 to insure that exploration does not interfer with any value for which the area has been designated unsuitable for surface coal mining.

PART 764—STATE PROCESSES FOR DESIGNATING AREAS UNSUITABLE FOR SURFACE COAL MINING OPERATIONS

Sec.
764.1 Scope.
764.2 Objectives.
764.3 Authority.
764.4 Responsibility.
764.11 Procedures: General process requirements.
764.13 Procedures: Petitions.
764.15 Procedures: Initial processing, recordkeeping, and notification requirements.
764.17 Procedures: Hearing requirements.
764.19 Procedures: Decision.
764.21 Data base and inventory system requirements.
764.23 Public information.
764.25 Regulatory authority responsibility for Implementation.

AUTHORITY: Sections 102, 201, 503, and 522, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1253, and 1272).

§ 764.1 Scope.

This Part establishes minimum procedures to be included in each approved State program for designating land areas in a State as unsuitable for all or certain types of surface coal mining operations and for terminating designations.

§ 764.2 Objective.

The objective of this part is to insure that States wishing to administer the Act on non-Federal and non-Indian lands implement processes to designate lands unsuitable for all or certain types of surface coal mining operations, and for terminating designations, as required under Sections 503(a)(5) and 522 of the Act.

§ 764.3 Authority.

(a) The Secretary has authority to approve State programs, including the procedures to designate lands as unsuitable for all or certain types of surface coal mining operations and for terminating such designations.

(b) The States have authority to develop and include in their State programs procedures consistent with this Part to designate lands unsuitable for all or certain types of surface coal mining operations and to terminate such designations.

§ 764.4 Responsibility.

(a) A person with an interest which is or may be adversely affected may petition the regulatory authority in order to have an area designated unsuitable for all or certain types of surface coal mining operations or to have such a designation terminated.

(b) The regulatory authority shall respond to petitions consistent with the procedures in this Part.

§ 764.11 Procedures: General process requirements.

Each State shall establish a process enabling objective decisions based upon competent and scientifically sound data and other relevant information concerning which, if any, land areas of a State are unsuitable for all or certain types of surface coal mining operations. This process shall include the requirements listed in Sections 764.13-764.25.

§ 764.13 Procedures: Petitions.

(a) *Right to petition.* Any person having an interest which is or may be adversely affected has the right to petition the regulatory authority to have an area designated as unsuitable for surface coal mining operations, or to have an existing designation terminated.

(b) *Designation.* A petitioner shall provide the following information for a complete and adequate petition to designate an area as unsuitable for surface coal mining operations:

(1) The location and approximate size of the area covered by the petition;

(2) Statements or allegations of facts and supporting evidence indicating that the area is unsuitable for all or certain types of surface coal mining operations;

(3) A brief description of how mining of the area has affected or may adversely affect people, land, air, water or other resources;

(4) The petitioner's name, address and telephone number; and

(5) Identification of the petitioner's interest which is or may be adversely affected.

(c) *Termination.* The only information that a petitioner need provide for a complete and adequate petition to terminate a designation of an area as unsuitable for all or certain types of surface coal mining operations:

(1) The location and approximate size of the area covered by the petition;

(2) Statements or allegations of facts, with supporting evidence not contained in the record of the proceeding in which the area was designated unsuitable, which evidence would tend to establish the statements or allegations, and which statements or allegations indicate that the designation of the area as unsuitable for all or certain types of coal mining operations should be terminated based on either—

(i) The nature or abundance of the protected resource or condition or other basis of the designation; or

(ii) Either—

(A) Reclamation being technologically and economically feasible if the designation was based on the criteria found in section 762.11(a) of this Subchapter; or

(B) The resources or condition being protectable during and after mining if the designation was based on the criteria found in section 762.11(b) of this Subchapter;

(3) The petitioner's name, address and telephone number; and

(4) Identification of the petitioner's interest which is or may be adversely affected by the designation.

§ 764.15 Procedures: Initial processing, recordkeeping, and notification requirements.

(a) (1) Within 30 calendar days of receipt of a petition, the regulatory authority shall notify the petitioner by certified mail whether or not the petition is complete according to Section 764.13 (b) or (c).

(2) The regulatory authority shall determine whether any identified or potential coal resources exist in or near the area covered by the petition. The regulatory authority shall determine the coal resources of the area without requiring any showing from the petitioner. If the regulatory authority finds there are not any identified or potential coal resources in the area covered by the petition, the regulatory authority shall return the petition to the petitioner with a statement of its findings.

(3) When considering a petition for an area which was previously and unsuccessfully proposed for designation the regulatory authority shall determine if the new petition presents new allegations of facts. If the petition does not contain new allegations of facts, the regulatory authority shall not consider the petition. The regulatory authority shall return the petitions to the petitioner with a state-

ment of its findings and a reference to the text of the previous designation proceedings where the evidence was considered.

(4) If the regulatory authority determines that the petition is incomplete, it shall return the petition to the petitioner together with a written statement of the reasons for the determination and the categories of information needed to make the petition complete.

(5) The regulatory authority shall notify the person who submits a petition of any request for a permit received which proposes to include any area covered by the petition.

(6) The regulatory authority shall not consider any petitions received after the close of the public comment period for a permit application covering the same area. The regulatory authority shall return the petitions to the petitioner with a statement of why the regulatory authority cannot consider the petition. For the purposes of this Section, close of the public comment period shall mean at the close of any informal conference held under 30 CFR 787.14, or, if no conferences are requested, then at the close of the period for filing written comments and objections under 30 CFR 787.12 and 787.13.

(b)(1) Within two weeks after the determination that a petition is complete, the regulatory authority shall circulate copies of the petition to, and request submittals of relevant information from other governmental agencies, the petitioner, any person with an ownership interest of record in the property and any other person known to the regulatory authority to have an interest in the property.

(2) Within three weeks after the determination that a petition is complete, the regulatory authority shall notify the general public of the receipt of the petition and request submittals of relevant information by a newspaper advertisement running once a week for two consecutive weeks in the locale of the area covered by the petition, in the newspaper of largest circulation in the State and in the official State register of public notices, if any.

(c) Until three days before the regulatory authority holds a hearing under Section 764.17, any person may intervene in the proceeding by filing allegations of facts, with supporting evidence which would tend to establish the allegations, and a short statement identifying the petition or petitions to which the allegations pertain and the intervenor's name, address and telephone number.

(d) Beginning immediately after a complete petition is filed, the regulatory authority shall compile and maintain a record all documents relating to the petition filed with or prepared by the regulatory authority. The regulatory authority shall make the record available for public inspection and copying, at reasonable cost, during all normal business hours in a central location of the county or multi-county area in which the land petitioned is located, and in the main office of the regulatory authority.

§ 764.17 Procedures: Hearing requirements.

(a) Within 10 months after receipt of a complete petition, the regulatory authority shall hold a public hearing in the locality of the affected area, provided that if all petitioners and intervenors so stipulate, a hearing need not be held. The hearing shall be legislative and fact-finding in nature, without cross examination of witnesses. The regulatory authority shall make a verbatim transcript of the hearing.

(b)(2) The regulatory authority shall give notice of the date, time and location of the hearing to:

(i) Local, State and Federal agencies which it reasonable determines may have an interest in its decision;

(ii) The petitioner and the intervenors;

(iii) Any person with a recorded ownership interest in the area covered by the petition; and

(iv) Any other person known to the regulatory authority to have an ownership interest or any other interest in the area covered by the petition.

(2) Notice of the hearing must be sent by certified mail and be postmarked not less than 30 days before the scheduled date of the public hearing.

(c) The regulatory authority shall notify the general public of the date, time, and location of the hearing by placing a newspaper advertisement once a week for two consecutive weeks in the locale of the area covered by the petition and once during the week prior to the scheduled date of the public hearing. The consecutive weekly advertisement must begin between 4 and 5 weeks before the scheduled date of the public hearing.

(d) The regulatory authority may, with the consent of all petitioners and intervenors, consolidate in a single hearing the hearings required for each of several petitions which relate to areas in the same locale.

(e)(1) At least 15 days before the hearing required under paragraph (a) of this section, the regulatory authority shall issue a detailed statement, subject to amendment based on facts presented at the hearing, on the potential coal resources of the area, the demand for coal resources, and the impact of such designation on the environment, the economy and the supply of coal.

(2) If in accordance with paragraph (a) of this section no hearing is held and the decision is to designate an area as unsuitable for all or certain types of surface coal mining operations, this detailed statement shall be issued at least 15 days before the decision is published.

§ 764.19 Procedures: Decision.

(a) In reaching its decision, the regulatory authority shall use—

(1) The information contained in the data base and inventory system;

(2) Information provided by other governmental agencies;

(3) The detailed statement issued under Section 764.17(e); and

(4) Any other relevant information submitted during the comment period.

(b) Within 60 days after completion of the public hearing, or if no public hearing is held then within 12 months after receipt of the complete petition, the regulatory authority shall issue a written decision on the petition, which shall state the basis for the decision. At the same time, the regulatory authority shall send the decision by certified mail to the petitioner, every other party to the proceeding, and to the Regional Director for the region in which the State is located.

(c) The decision of the State regulatory authority with respect to a petition, or the failure of the regulatory authority to act within the time limits set forth in this Section, shall be subject to judicial review by a court of competent jurisdiction in accordance with State law as required by Section 526(e) of the Act.

§ 764.21 Data base and inventory system requirements.

(a) The regulatory authority shall develop a data base and inventory system which will permit evaluation of whether reclamation is feasible in areas covered by petitions.

(b) The regulatory authority shall include in the data base and inventory system information relevant to the criteria in 30 CFR 762.11. Without limitation it must include information the regulatory authority may receive from the United States Fish and Wildlife Service, the State Historic Preservation Officer, and the agency administering the prevention of significant deterioration provisions of the Clean Air Act Amendments of 1977.

(c) The regulatory authority shall add to the data base and inventory system sufficient information on potential coal resources of the State, demand for those resources, the environment, the economy and the supply of coal, to enable the regulatory authority to prepare the statements required by Section 764.17(b).

(d) The regulatory authority shall add to the data base and inventory system relevant information that becomes available from petitions, publi-

cations, experiments, permit applications, mining operations and other sources.

§ 764.23 Public information.

(a) The regulatory authority shall make the information and data base system developed under Section 764.21 available to the public for inspection and copying at reasonable cost.

(b) The regulatory authority shall publish a brochure outlining the petition procedures necessary to have an area designated as unsuitable for all or certain types of surface coal mining or to have designations terminated. The brochure must also describe how the inventory and data base system can be used.

(c) The regulatory authority shall make copies of the brochure available to the public and if requested shall advise any person as to the requirements for preparing petitions and complying with the petition procedures.

§ 764.25 Regulatory authority responsibility for implementation.

(a) The regulatory authority shall not issue any surface mining and reclamation operations permits on lands which are designated unsuitable for all surface mining operations. The regulatory authority may issue a permit for surface coal mining and reclamation operations on lands designated unsuitable for certain types of surface coal mining operations only if the permit prohibits the types of operations for which the land was designated unsuitable.

(b) The regulatory authority shall not issue any surface coal mining and reclamation operations permits on lands which are under study or for which a petition to designate them unsuitable has been filed or is pending, as provided in 30 CFR 786.15(d) (1) and (2) and in Section 510(b)(4) of the Act.

(c) The regulatory authority shall maintain a map of areas designated as unsuitable for all or certain types of surface coal mining operations.

(d) The regulatory authority shall make available to any person any information within its control regarding designations except proprietary information on the chemical and physical properties of the coal.

PART 765—DESIGNATING LANDS UNSUITABLE FOR SURFACE COAL MINING OPERATIONS UNDER A FEDERAL PROGRAM FOR A STATE

Sec.
765.1 Scope.
765.3 Responsibility.
765.11 Procedures.
765.12 State variations.
765.13 Effective date.

AUTHORITY: Sections 102, 201, 501, 503, 504, and 522, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, and 1272).

§ 765.1 Scope.

This Part establishes minimum procedures to be included in each Federal program within a State for the designation of land areas in a State as unsuitable for all or certain types of surface coal mining operations and for the termination of such designations.

§ 765.3 Responsibility.

(a) Section 504 of the Act requires the Director to prepare, promulgate and implement an entire Federal program for a State if the State—

(1) Fails to submit a State program within the time allowed;

(2) Fails to submit an acceptable State program within either sixty days of a notice of an incomplete submission or within sixty days of disapproval of a proposed State program; or

(3) Fails to implement, enforce, or maintain an approved State program.

(b) Section 504(g) of the Act also requires the Director to prepare, promulgate, and implement a partial Federal program, if the State fails to implement, enforce, or maintain an approved State program in part.

§ 765.11 Procedures.

At the time a Federal program is promulgated for a State the Director shall develop a process for designating lands unsuitable for all or certain types of surface coal mining operations consistent with the requirements of Parts 761, 762 and 764 of this Subchapter. The Director shall include in that process the procedures, data base, inventory system and public information requirements of Part 764.

§ 765.12 State variations.

When developing the procedures and criteria for designation lands unsuitable for all or certain types of surface coal mining operations in a Federal program for a State, the Director shall consider:

(a) The nature of the State's terrain, climate, coal deposits, biological, chemical and other relevant physical characteristics;

(b) The structure and responsibilities of the State government and local governments within the State including State and local land-use plans;

(c) Standards adopted by a State which are more stringent than the standards of the Act or the regulations under Part 762; and

(d) The structure and responsibilities of the State government and local governments within the State.

§ 765.13 Effective date.

(a) The Director shall implement the procedures and criteria of a Federal program for a State for designating lands unsuitable for all or certain types of surface coal mining one year after a Federal program is implemented for a State, as required by Section 504(a) of the Act.

(b) Where a Federal program is promulgated because of a State's failure to adequately implement and maintain or enforce its program for designating lands unsuitable for all or certain types of coal mining, the designation procedure of a Federal program for the State shall be effective immediately upon implementation of the Federal program.

PART 769—PETITION PROCESS FOR DESIGNATION OF FEDERAL LANDS AS UNSUITABLE FOR ALL OR CERTAIN TYPES OF SURFACE COAL MINING OPERATIONS AND FOR TERMINATION OF PREVIOUS DESIGNATIONS

Sec.
769.1 Scope.
769.3 Authority.
769.4 Responsibility.
769.7 Regulatory Policy.
769.11 Who may submit a petition.
769.12 Where to submit petitions.
769.13 Contents of petitions.
769.14 Petition process prior to hearing.
769.15 Intervention.
769.16 Public information.
769.17 Public hearing.
769.18 Decisions on petitions.

AUTHORITY: Sections 102, 201, 522, and 523, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1272 and 1273).

§ 769.1 Scope.

This part establishes minimum procedures for designating Federal lands as unsuitable for all or certain types of surface coal mining operations and for terminating previous designations, based on petitions submitted by any person having an interest which is or may be adversely affected.

§ 769.3 Authority.

Section 522(c) of the Act authorizes the Secretary to establish a process for any person having an interest, which is or may be adversely affected by surface coal mining operations or to have such a designation terminated.

§ 769.4 Responsibility.

(a) The Regional Director shall act on petitions to have Federal lands designated unsuitable for all or certain types of surface coal mining operations or to have these designations terminated pursuant to the criteria set forth in part 762 of this subchapter. Prior to designation, the Regional Director shall consult with appropriate State and local agencies.

(b) The Regional Director for the region in which Federal land proposed for designation is located is authorized to receive petitions, conduct public hearings and issue decisions on petitions.

(c) The surface managing agency shall make recommendations for approval or disapproval of petitions based on present and future land use planning and management of public lands.

§ 769.7 Regulatory policy.

(a) The Regional Director shall not issue any permits for surface mining and reclamation operations on Federal lands which are designated unsuitable for all surface mining and reclamation operations. The Regional Director may issue a permit for surface coal mining and reclamation operations on Federal lands designated unsuitable for certain types of surface coal mining and reclamation operations only if the permit prohibits those types of operations for which the Federal lands were designated unsuitable.

(b) The Regional Director shall not issue any surface coal mining and reclamation operations permits on lands which are under study or for which a petition to designate them unsuitable has been filed or is pending, as provided in Sections 786.15(d) (1) and (2) of this chapter.

(b) The Regional Director shall maintain a map of areas designated as unsuitable for all or certain types of surface coal mining operations.

(d) Under the Freedom of Information Act, the Regional Director shall make available to any person any information within its control relating to a petition to designate Federal lands unsuitable for all or certain types of surface coal mining and reclamation operations or to terminate a designation. The Director may not release any information which is proprietary or is confidential under other Federal statutes or regulations.

(e) Once an area of Federal lands is designated as unsuitable for all or certain types of surface coal mining operations, the authorized officer shall condition any permit or lease in a manner so as to limit surface coal mining operations on the designated area.

§ 769.11 Who may submit a petition.

Any person who has an interest which is or may be adversely affected by surface coal mining operations to be conducted on Federal lands may petition the Secretary to have an area designated as unsuitable for all or certain types of surface coal mining operations or to have an existing designation terminated. This right does not apply to areas set aside by other acts.

§ 769.12 Where to submit petitions.

Each petition to have an area of Federal lands designated as unsuitable or to terminate an existing designation shall be submitted to the Regional Director of the region in which the Federal lands are located.

§ 769.13 Contents of petitions.

(a) *Designation.* Each petition for designating areas as unsuitable for all or certain types of surface coal mining operations shall contain the following information:

(1) The location and approximate size of the area covered by the petition;

(2) Statements or allegations of facts, with supporting evidence indicating that the area is unsuitable for all or certain types of surface coal mining operations;

(3) A brief description as to how mining has affected or may adversely affect people, land, air, water or other resources of the area covered by the petition;

(4) A statement of the petitioner's interest which is or may be adversely affected; and

(5) The petitioner's name, address and telephone number.

(b) *Termination.* Petitions to terminate the designation of an area for all or certain types of surface coal mining operations shall contain the following information:

(1) Statements or allegations of facts with supporting evidence indicating that the designation should be terminated. The statements or allegations shall not be contained in the record of the proceeding in which the area was designated unsuitable. The statements or allegations shall concern either—

(i) The nature of abundance of the protected resource or condition or other basis of the designation; or

(ii) Either mining or reclamation technology or economics which would render reclamation technologically and economically feasible where the designation is based on the criteria found in Section 762.11(a) of this Subchapter, or mining or reclamation technology or procedures which would protect the resource or condition during and after mining if the designation is based on the criteria found in Section 762.11(b) of this Subchapter;

(2) The location and approximate size of the area covered by the petition;

(3) Identification of the Federal surface managing agency;

(4) The petitioner's name, address and telephone number; and

(5) A statement of the petitioner's interest which is or may be adversely affected by the designation of Federal lands.

§ 769.14 Procedures prior to hearing.

(a) Within 30 calendar days of receipt of a petition, the Regional Director shall notify the petitioner by certified mail whether or not the petition is complete according to Section 769.13.

(b) If the Regional Director determines that the petition is incomplete, he shall return the petition to the petitioner together with a written statement of the reasons for the determination and the categories of information needed to complete the petition.

(c) The Regional Director shall determine whether any identified or potential coal deposits exist in or near the area covered by the petition. If there are no potential coal deposits in the area covered by the petition, the Regional Director shall reject the petition.

(d) (1) Within two weeks after the determination that the petition is complete, the Regional Director shall send a copy of the petition to the Authorized Officer of the surface managing agency by certified mail for recommendation.

(2) The Authorized Officer of the surface managing agency shall recommend approval or disapproval of the petition within 30 days of receipt of a copy of the petition providing that the area covered by the petition has been included in a completed Federal lands review or within nine (9) months if the area has not been included in a Federal lands review.

(e) Within two weeks after the determination that a petition is complete, the Regional Director shall circulate copies of the petition to, and request submittals of relevant information from the surface managing agency, other interested State, local, or Federal agencies, the petitioner, any person with an ownership interest of record in the property and any intervenors.

(f) (1) The Regional Director shall consider petitions in areas covered by existing land use plans which have specifically considered surface coal mining operations to determine whether:

(i) The petitioner has presented significant new evidence not previously considered, and

(ii) All of the criteria set forth in Part 762 were considered.

(2) Where no new significant evidence is presented and the criteria set forth in Part 762 have been considered, the Regional Director may reject the petition.

§ 769.15 Intervention.

Up to ten days before the Regional Director holds a hearing on a petition under Section 769.17(a)(1), any person may intervene in the proceeding by filing allegations of facts, with supporting evidence which would tend to

establish the allegations, together with a short statement identifying the petition or petitions to which the allegations pertain and the intervenor's name, address and telephone number.

§ 769.16 Public information.

(a) Within three weeks after determining that a petition is complete, the Regional Director shall notify the general public of the receipt of the petition and request submittals of relevant information by a newspaper advertisement running once a week for two consecutive weeks in the locale of the area covered by the petition, in the newspaper of largest circulation in the State, in the FEDERAL REGISTER and in the official State register of public notices, if any.

(b) Beginning immediately after a complete petition is filed, the Regional Director shall compile and maintain a record consisting of all documents not otherwise exempt under the Freedom of Information Act, relating to the petition filed with or prepared by the Regional Director. The Regional Director shall make the record available for public inspection and copying, at reasonable costs, during all normal business hours copying, at reasonable costs, at a central location of the county or multi-county area where the land petitioned is located, and at the Regional Office.

§ 769.17 Public hearing.

(a) Within 10 months after receipt of a complete petition, the Regional Director shall hold a public hearing within the locality of the affected area. If all petitioners and intervenors so ageee, a hearing need not be held. The hearing shall be legislative and fact-finding in nature, without cross-examination of witnesses. The Regional Director shall make a verbatim transcript of the hearing.

(b) (1) The Regional Director shall give notice of the date, time and location of the hearing to:

(i) The surface managing agency, local, State and Federal agencies which it reasonably determines may have an interest in its decision;

(ii) The petitioner and the intervenors;

(iii) Any person with an ownership interest of record and to any other person known to the Regional Director to have an ownership interest or any other interest in the area covered by the petition.

(2) Notice of the hearing shall be sent by certified mail and be postmarked not less than 30 days before the scheduled date of the public hearing; and

(3) The Regional Director shall notify the general public of the date, time and location of the hearing by placing an advertisement once a week for two consecutive weeks in the locale of the area covered by the petition and once during the week prior to the scheduled date of the public hearing. The consecutive weekly advertisement must begin between four and five weeks prior to the scheduled date of the public hearing.

(c) The Regional Director may consolidate into a single hearing the hearings required for each of several petitions which relate to areas in the same locale.

(d) Where lands administered by the Department of the Interior and Agriculture are contiguous or intermingled or where one Department's resource management could affect resources or the other Department's land, the Regional Director shall refer a copy of the petition to the Department of Agriculture and shall consider that Department's recommendations about designating those lands unsuitable for all or certain types of surface coal mining, or terminating such designation.

(e) If any petition relates to an area of Federal lands which is the subject of a pending coal mining and reclamations operations permit application, the Regional Director may coordinate the hearing on the petition required under Paragraph (a)(1) of this Section with any informal conference held in accordance with Section 513(b) of the Act. Nothing in this Part shall in any way relieve an applicant for a mining and reclamation operations permit from the burden of establishing that his application is in compliance with the requirements of the applicable State or Federal programs.

(f) At least fifteen days prior to the hearing required under paragraph (a) of this Section, the Regional Director shall issue a detailed statement, subject to amendment based on facts presented at the hearing, on

(1) The abundance of coal resources of the area,

(2) The demand for coal resources, and

(3) The impact of such designation on the environment, the economy and the supply of coal.

(g) If, in accordance with Paragraph (a) of this Section, no hearing is held and the decision is to designate an area as unsuitable for all or certain types of surface coal mining operations, this detailed statement shall be issued at least fifteen (15) days before the decision is published.

§ 769.18 Decisions on petitions.

(a) In reaching his decision, the Regional Director shall use the information and recommendation of the surface managing agency, information provided by other governmental agencies, the detailed statement issued under Section 769.17(f), and any other relevant information submitted prior to or in connection with the hearing.

(b) For all petitions, a final written decision must be issued within 60 days after completion of the public hearing, or if no public hearing is held, then within 12 months after receipt of the complete petition.

(c) The Regional Director shall include in his decision on the petition a statement of reasons for the decision.

(d) The Regional Director shall send the decision and statement required by paragraphs (b) and (c) of this Section by certified mail to the petitioner, the Secretary, the surface managing agency, and to every other party to the proceeding.

(e) If the Regional Director concurs with the recommendation of the surface managing agency, the Regional Director's decision becomes final.

(f) If the Regional Director determines that the recommendation of the surface managing agency is incorrect, he shall so notify the appropriate Regional or State Director of the surface managing agency within 30 days after the public hearing. The decision will at the same time be referred to the Secretary through respective agency heads for resolution and issuance of a final decision within 60 days after the hearing, if any.

SUBCHAPTER G—SURFACE COAL MINING AND RECLAMATION OPERATIONS PERMITS SYSTEM

PART 770—GENERAL REQUIREMENTS FOR PERMIT SYSTEMS UNDER STATE PROGRAMS

Sec.

770.1 Scope.
770.2 Objectives.
770.4 Responsibilities.
770.5 Definitions.
770.6 Organization.
770.11 Applicability.
770.12 Coordination with requirements under other laws.

AUTHORITY: Sections 102, 201, 501, 503, 504, 506, 507, 508, and 510, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1256, 1257, 1258, and 1260).

§ 770.1 Scope.

This Subchapter provides the minimum requirements for the Secretary's approval of the permit system components of regulatory programs for surface coal mining and reclamation operations. These include—

(a) Requirements for obtaining permits;

(b) The timing, development and filing of permit applications;

(c) Regulatory authority review of applications, approval or denial of permits;

(d) Administrative review of regulatory authority decisions on permits;

(e) The terms and conditions of permits;

(f) Public participation in the permit process;

(g) The renewal and revision of permits;

(h) Requirements for permits for special categories of surface coal mining and reclamation operations; and

(i) Procedures for coal exploration operations under regulatory programs.

§ 770.2 Objectives.

The objectives of this Subchapter are to ensure both that surface coal mining and reclamation operations are conducted only after the regulatory authority has first determined that reclamation is feasible and that all permitted surface coal mining and reclamation operations are conducted so as to fully protect the environment.

§ 770.4 Responsibilities.

(a) Persons seeking to engage in surface coal mining and reclamation operations must submit an application for a permit in accordance with this Subchapter.

(b) The regulatory authority shall review each application for a permit, approving or disapproving each permit application and issuing, conditioning, suspending, or revoking permits and renewals and revisions under an approved regulatory program.

§ 770.5 Definitions.

As used throughout this Subchapter, except where otherwise indicated:

Applicant means a person who seeks to obtain a permit under this subchapter G and the regulatory program.

Application means the documents and other information filed with the regulatory authority under this Subchapter G and the regulatory program for the issuance of a permit.

Complete application means an application for permit which contains all information required under the Act, this Subchapter and a regulatory program.

General area means, with respect to hydrology, the area surrounding a proposed permit area and included within the boundaries of the unit of the Department's Office of Water Data Coordination Catalog which contains the mine. Mine sites which lie in more than one catalog unit or which may affect more than one catalog unit may have a general area larger than one catalog unit, as specified by the regulatory authority.

Property to be mined means the surface and mineral estates on and underneath land which are within the permit area.

Violation notice means any written notification from a governmental entity of a violation of law, whether by letter, memorandum, legal or administrative pleading, or other written communication.

§ 770.6 Organization.

This Subchapter is organized according to separate parts, as follows:

(a) Parts 770 and 771 establish introductory, definitional and other general provisions applicable for all Parts of this Subchapter.

(b) Part 776 establishes procedures regarding coal exploration operations.

(c) Parts 778, 779, and 780 establish specific requirements for permit application contents for surface coal mining activities.

(d) Parts 782, 783, and 784 establish specific requirements for permit application contents for underground coal mining activities.

(e) Part 785 establishes requirements for permits for certain special categories of coal mining.

(f) Parts 786, 787, 788 and 789 establish requirements for the review, issuance, or denial of permits and for public participation in that process.

(g) Parts 790, 791, and 792 establish requirements for the revision, renewal, and transfer, sale or assignment of rights under permits.

§ 770.11 Applicability.

(a) This Subchapter applies to each person who applies for a permit for surface coal mining and reclamation operations or conducts surface coal mining and reclamation operations pursuant to a permit under regulatory programs.

(b) This Subchapter applies to each regulatory authority under a regulatory program and, where specifically provided, to the Director.

§ 770.12 Coordination with requirements under other laws.

Each State program and each Federal program shall, to avoid duplication, provide for a process for coordinating the review and issuance of permits for surface coal mining and reclamation operations with:

(a) Any other Federal or State permit process applicable to such operations including, at a minimum, permits required under the:

(1) Clean Water Act, as amended (33 U.S.C. Sec. 1251 et seq.);

(2) Clean Air Act, as amended (42 U.S.C. Sec. 7401 et seq.);

(3) Resource Conservation and Recovery Act (42 U.S.C. Sec. 3251-3259); and

(b) The requirements of any water quality management plans which have been approved by the Administrator of the United States Environmental Protection Agency under Section 208 or Section 303(e) of the Clean Water Act, as amended, 33 U.S.C. Sections 1288, 1313(e).

(c) The applicable requirements of the Endangered Species Act of 1973, 16 U.S.C. Sections 1531 et seq.; the Fish & Wildlife Coordination Act, 16 U.S.C. Section 661 et seq.; The National Historic Preservation Act of 1966 (as amended) (16 U.S.C. Sections 470 et. seq.); Executive Order 11593; and the Archeological and Historic Preservation Act of 1974 (16 U.S.C. Section 461 et. seq.).

PART 771—GENERAL REQUIREMENTS FOR PERMITS AND APPLICATIONS

Sec.

771.1 Scope.
771.2 Objectives.
771.11 General requirements for permits—Operators.
771.13 Continued operation under interim permits.
771.15 Continued operation under Federal program permits.
771.17 Compliance with permits.
771.19 Permit application filing deadlines.
771.21 Permit applications—General requirements for format and contents.
771.25 Permit fees.
771.27 Verification of application.

AUTHORITY: Sections 102, 201, 501, 502, 503, 504, 506, 507, 508, 510, 511, 515 and 516, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. Sections 1202, 1211, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1260, 1261, 1265 and 1266).

§ 771.1 Scope.

This Part establishes minimum criteria for general permits and applications requirements for obtaining the Secretary's approval of regulatory programs.

§ 771.2 Objectives.

The objectives of this Part are to insure that all surface coal mining and reclamation operations are conducted only under permits issued in accordance with the requirements of the regulatory program, that all persons make timely application for permits, and to provide general requirements on permit fee systems and the contents of applications.

§ 771.11 General requirements for permits—Operators.

Except as provided for in Section 771.13 on and after 8 months from the date on which a regulatory program is approved by the Secretary, no person shall engage in or carry out on non-Federal or non-Indian lands within a State any surface coal mining and reclamation operations unless that person has first obtained a valid permit issued by the regulatory authority under an approved regulatory program.

§ 771.13 Continued operation under interim permits.

A person conducting surface coal mining operations, under a permit

issued by the regulatory authority in accordance with the requirements of section 502 of the Act may conduct these operations beyond the period prescribed in Section 771.11, if all of the following conditions are present:

(a) Timely and complete application for a permit under the permanent regulatory program has been made to the regulatory authority in accordance with the provisions of the Act, this Subchapter and the regulatory program;

(b) The regulatory authority has not yet rendered an initial decision with respect to such application; and

(c) The operations are conducted in compliance with all terms and conditions of the interim permit, the requirements of the Act, Parts 710, 715, 716, and 717 of this Chapter and the State statutes and regulations adopted in accordance with subsection 502 of the Act.

§ 771.15 Continued operation under Federal program permits.

A permit issued by the Regional Director pursuant to a Federal program for a State shall be valid under any superceding State program approved by the Director, provided that:

(a) The Federal permittee has the right to apply to the State regulatory authority for a State permit to supersede the Federal permit;

(b) The regulatory authority shall review a permit issued pursuant to the superseded Federal program to determine that the requirements of the Act and the approved State program are not violated; and

(c) To the extent that the approved State program contains additional requirements not contained in the Federal program for the State, the State regulatory authority shall:

(1) Issue an order requiring the permittee to comply with such additional requirements within 60 days, unless the permittee demonstrates to the State regulatory authority that it is physically impossible to meet such additional requirements within 60 days, or unless the State regulatory authority agrees to a longer period under an established time schedule; and

(2) Notify the permittee in writing of the right to an adjudicatory hearing with respect to such order, in the manner and time provided for in the State program.

§ 771.17 Compliance with permits.

All persons shall conduct surface coal mining and reclamation operations under permits issued pursuant to this Subchapter and a regulatory program and shall comply with the terms and conditions of the permit and the requirements of the Act, this Chapter and the regulatory program.

§ 771.19 Permit application filing deadlines.

(a) *Initial implementation of permanent regulatory programs*

Not later than 2 months following the approval of a regulatory program regardless of litigation contesting that approval, each person who conducts or expects to conduct surface coal mining and reclamation operations after the expiration of 8 months from such approval shall file an application for a permit for those operations.

(b) *Filing deadlines after two months from approval of State programs.*

(1) *General.* Each person who conducts or expects to conduct surface coal mining and reclamation operations shall file a complete application for a permit for those operations within the time established by the regulatory authority.

(2) *Renewal of valid permits.* An application for renewal of a permit shall be filed with the regulatory authority at least 120 days before the expiration of the permit involved.

(3) *Revisions of permits.* Any application for revision of a permit shall be filed with the regulatory authority at least 6 months before the date on which the permittee expects to revise mining or reclamation operations, unless the regulatory authority has determined that a period for review of the application of less than 6 months is appropriate.

§ 771.21 Permit applications—General requirements for format and contents.

(a) An application for a permit to conduct surface coal mining operations shall be filed in the format required by the regulatory authority. The application shall be complete and include, at a minimum, for surface coal mining, all the applicable information required under 30 CFR Parts 778, 779, and 780 and for underground coal mining, all the information required under 30 CFR Parts 782, 783 and 784.

(b) Information set forth in the application shall be current, presented clearly and concisely, and supported by appropriate references to technical and other written material available to the regulatory authority.

(c) All technical data submitted in the application shall be accompanied by—

(1) Names of persons or organizations which collected and analyzed such data;

(2) Dates of the collection and analyses; and

(3) Descriptions of methodology used to collect and analyze the data.

(d) The application shall state the name, address and position of officials of each private or academic research organization or governmental agency consulted by the applicant in preparation of the application regarding information on land-uses, soils, geology, vegetation, fish and wildlife, water quantity and quality, air quality, and cultural and historic features.

§ 771.25 Permit fees.

Each application for a permit under a regulatory program shall be accompanied by a fee, determined according to the requirements of the regulatory program.

§ 771.27 Verification of application.

Each application for a permit shall be verified under oath, by a responsible official of the applicant, that the information contained in the application is true and correct to the best of the official's information and belief.

PART 776—GENERAL REQUIREMENTS FOR COAL EXPLORATION OPERATIONS

Sec.

776.1 Scope.
776.2 Objectives.
776.3 Responsibilities.
776.11 General requirements: Exploration operations of less than 250 tons.
776.12 General requirements: Exploration operations of more than 250 tons.
776.13 Applications: Approval or disapproval.
776.14 Applications: Notice and hearing.
776.15 Coal exploration operations compliance duties.
776.17 Public availability of information.

AUTHORITY: Sections 102, 201, 501, 503, 504, 512, 515, 516, 517, 518, and 521 Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1262, 1265, 1266, 1267, 1268 and 1271).

§ 776.1 Scope.

This Part establishes the minimum requirements for the Secretary's approval of regulatory program coal exploration procedures. This Part applies to the regulatory authority and to any person who conducts or seeks to conduct coal explorations which substantially disturb the natural land surface.

§ 776.2 Objectives.

The objectives of this part are to insure that coal exploration operations are conducted to protect the environment and otherwise meet the requirements of the Act, this Chapter, and the regulatory program.

§ 776.3 Responsibilities.

(a) It is the responsibility of any person conducting or seeking to conduct coal exploration operations under a regulatory program to comply with the requirements of this Part.

(b) It is the responsibility of the regulatory authority to receive notices of intention to explore and applications for approval of exploration, approve

or disapprove the applications, and to issue, condition, suspend or revoke approvals under an approved regulatory program.

§ 776.11 General requirements: Exploration operations of less than 250 tons.

(a) Any person who intends to conduct coal exploration operations during which less than 250 tons of coal will be removed in any one location shall, prior to conducting the operations, file with the regulatory authority a written notice of intention to explore.

(b) The notice shall include—

(1) A precise description and map at a scale of 1:24,000 or larger of the exploration area;

(2) A statement of the period of intended exploration;

(3) A description of the basis upon which the applicant claims the right to enter such area for the purpose of conducting exploration and reclamation operations; and

(4) A description of the practices proposed to be followed to protect the environment.

(c) The regulatory authority shall, except as provided in Section 776.17, place such notices on public file and make them available for public inspection and copying.

§ 776.12 General requirements: Exploration operations of more than 250 tons.

Any person who intends to conduct coal exploration operations in which more than 250 tons of coal are removed in any one location, shall, prior to conducting the operations, obtain the written approval of the regulatory authority in accordance with the following:

(a) *Application for approval.* Each application for approval shall contain, at a minimum, the following information—

(1) The name, address and telephone number of the applicant;

(2) The name, address and telephone number of the representative of the applicant who will be present at and be responsible for conducting the exploration operations;

(3) An exploration and reclamation operations plan, including—

(i) A narrative description of the proposed exploration area, cross-referenced to the map required under paragraph (a)(5) of this section, including surface topography; geological, surface water, and other physical features; vegetative cover; the distribution and important habitats of fish, wildlife, and plants, including, but not limited to, any endangered or threatened species listed pursuant to Section 4 of the Endangered Species Act of 1973 (16 U.S.C. Sections 1531 et seq); districts, sites, buildings, structures or objects listed on or eligible for listing on the National Register of Historic Places; and cultural resources located within the proposed exploration area;

(ii) A narrative description of the current land use of the area;

(iii) A narrative description of the methods to be used to conduct coal exploration and reclamation operations, including, but not limited to, the types and use of equipment, drilling, blasting, road or other access route construction and excavated earth and other debris disposal activities;

(iv) An estimated timetable for each phase of the exploration and reclamation operations and for completion of those programs;

(v) The estimated amounts of coal to be removed and a description of the methods to be used to determine such amounts;

(vi) A description of the measures to be used to comply with the applicable requirements of Part 815, Subchapter K of this Chapter;

(4) The name and address of the owner of record of the surface and subsurface estate of the area to be explored;

(5) A map in a scale of 1:24,000 or larger showing the areas of land to be substantially disturbed, by the proposed exploration and reclamation operations. The map shall specifically show existing roads, occupied dwellings, and pipelines; proposed location of trenches, roads, and other access routes and structures to be constructed; the location of land excavations to be conducted; water or coal exploratory holes and wells to be drilled or altered; earth or debris disposal areas; current land uses of the area; existing bodies of surface water; historic, topographic, cultural and drainage features; and habitats of any endangered or threatened species listed under Section 4 of Endangered Species Act of 1973 (16 U.S.C. Section 1531 et seq); and

(6) If the surface is owned by a person other than the applicant, a description of the basis upon which the applicant claims the right to enter the exploration area for the purpose of conducting exploration and reclamation operations.

(b) *Public notice and opportunity to comment.* Except as provided by Section 781.17, public notice of the application and opportunity to comment shall be provided in accordance with the following:

(1) Public notice of the filing of the application with the regulatory authority shall be posted at a public office in the vicinity of the proposed exploration area;

(2) The public notice shall state the name and business address of the person seeking approval, the date of filing of the application, the address of the regulatory authority at which written comments on the application may be submitted, and a description of the general area of exploration;

(3) Any person shall have the right to file written comments on the application within reasonable time limits established in the regulatory program.

§ 776.13 Applications: Approval or disapproval.

(a) The regulatory authority shall act upon a completed application for approval within a reasonable period of time established in the regulatory program.

(b) The regulatory authority may approve a complete application filed in accordance with this Part, if it finds in writing that the applicant has demonstrated that the exploration and reclamation operations described in the application—

(1) Will be conducted in accordance with the requirements of the Act, 30 CFR Part 815, this Part and the regulatory program;

(2) Will not jeopardize the continued existence of an endangered or threatened species listed pursuant to Section 4 of the Endangered Species Act of 1973 (16 U.S.C. Section 1531 *et seq.*) or result in the destruction or adverse modification of critical habitat of such species, and

(3) Will not adversely affect any cultural resources or districts, sites, buildings, structures, or objects listed or eligible for listing on the National Register of Historic Places, unless the proposed operations have been approved by the agency with jurisdiction over such matters.

(c) Each approval issued by the regulatory authority shall contain conditions necessary to ensure that the exploration operations will be conducted in compliance with the Act, the provisions of 30 CFR Part 815, this Part and the regulatory program.

§ 776.14 Applications: Notice and hearing.

(a) The regulatory authority may hold a hearing on its decision to approve or disapprove application under Section 776.13 in the time and manner provided for in the regulatory program.

(b) The regulatory authority shall notify the applicant, in writing of its decision to approve or disapprove the application. If the application is disapproved, the notice to the applicant shall include a statement of the reason for disapproval. The regulatory authority shall provide public notice of approval or disapproval of each application by publication in a newspaper of general circulation in the general vicinity of the proposed operations.

§ 776.15 Coal exploration operations compliance duties.

(a) All coal exploration and reclamation operations shall be conducted in accordance with the coal exploration operations requirements of the Act, this Part, Part 815 of this Chapter and the regulatory program, and any conditions of the approval for such operations by the regulatory authority.

(b) Any person who conducts any coal exploration operations which substantially disturb the natural land surface in violation of Section 512 of the Act, the provision of this Part, 30 CFR Part 815 or the regulatory program shall be subject to the provisions of Section 518 of the Act, Subchapter L of this Chapter, and the applicable inspection and enforcement provisions of the regulatory program.

§ 776.17 Public availability of information.

(a) Except as provided in paragraph (b), of this section all information submitted to the regulatory authority under this Part shall be made available for public inspection and copying at the local offices of the regulatory authority closest to the mine.

(b) (1) The regulatory authority shall not make information available for public inspection if the person submitting it requests in writing at the time of submission that it not be disclosed and if the regulatory authority determines that the information is confidential.

(2) The regulatory authority shall determine that information is confidential if it concerns trade secrets or is privileged commercial or financial information which relates to the competitive rights of the person intending to conduct exploration operations.

PART 778—SURFACE MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

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AUTHORITY: Secs. 102, 201, 501, 503, 504, 506, 507, 508, 510, 515, and 522, Pub. L. 95-87, 91 Stat. 945 (30 USC 1202, 1211, 1251, 1253, 1254, 1256, 1257, 1258, 1260, 1265, and 1272).

§ 778.1 Scope.

This Part establishes the minimum requirements regarding the legal, financial, compliance and general information that must be contained in permit applications for surface mining activities except for underground coal mining activities.

§ 778.2 Objectives.

The objective of this Part is to ensure that all relevant information regarding the ownership and control of the person who conducts surface mining activities, the ownership and control of the property to be affected by the operations, the compliance status and history of such persons, and other important information is provided to the regulatory authority under a regulatory program prior to a decision to issue or deny a permit.

§ 778.4 Responsibilities.

It is the responsibility of the permit applicant to provide to the regulatory authority all of the information required by this Part.

§ 778.5 Definition.

As used in this Part *Principal shareholder* means any person who is the owner of record of 10 percent or more of any class of voting stock.

§ 778.11 Applicability.

This part applies to any person who applies for a permit to conduct surface mining activities.

§ 778.13 Identification of interests.

(a) Each application shall contain the names, addresses, and telephone numbers of—

(1) The permit applicant;

(2) Every legal or equitable owner of record of the property to be mined;

(3) The holders of record of any leasehold interest in the property to be mined;

(4) Any purchaser of record under a real estate contract of the property to be mined;

(5) The operator if the operator is a person different from the applicant; and

(6) The resident agent of the applicant who will accept service of process.

(b) Each application shall contain a statement of whether the applicant is a corporation, partnership, single proprietorship, association or other business entity. For businesses other than single proprietorships, the application shall contain the following information, where applicable:

(1) Names and addresses of every officer, partner, director or other person performing a function similar to a director of the applicant;

(2) Name and address of any person who is a principal shareholder of the applicant; and

(3) Names under which the applicant, partner, or principal shareholder previously operated a surface coal mining operation in the United States within the 5 years preceeding the date of application.

(c) If any owner of record, holder of record, purchaser of record or operator identified under paragraph (a) of this section is a business entity other than a single proprietor, the application shall contain the names and addresses of their principals, officers, and resident agents.

(d) Each application shall contain a statement of any current or previous coal mining permits in the United States held by the applicant and by any person identified in paragraph (b)(3) of this section, and of any pending permit application to conduct coal mining operations in the United States. The information shall be listed by permit or application number and shall identify the regulatory authority and State for each such coal mining operation.

(e) Each application shall contain the names and addresses of the owners of record of all surface and subsurface areas contiguous to any part of the proposed permit area.

(f) Each application shall contain the name of the mine, if any, and the Mine Safety and Health Administration identification number for the mine and all sections of the mine.

§ 778.14 Compliance information.

Each permit application shall contain—

(a) A statement of whether the applicant, any subsidiary, affiliate or persons controlled by or under common control with the applicant has—

(1) Had a Federal or State mining permit suspended or revoked in the last 5 years; or

(2) Forfeited a coal mining bond or similar security deposited in lieu of bond.

(b) If a suspension, revocation or forfeiture has occurred, a statement of the facts involved, including—

(1) Identification number and date of issuance of the permit or date and amount of bond or similar security;

(2) Identification of the authority that suspended, revoked or forfeited and the stated reasons for the action;

(3) The current status of the permit, bond or similar security involved;

(4) The date, location and type of any administrative or judicial proceed-

ings initiated concerning the suspension, revocation, or forfeiture; and

(5) The current status of these proceedings.

(c) A listing of each violation notice received by the applicant involving any coal mining operation pertaining to air or water environmental protection incurred during the 3 years before the application date with a statement about each violation notice, including—

(1) The date of issuance and the issuing regulatory authority, department or agency;

(2) A brief description of the particular violation alleged in the notice;

(3) The date, location and type of any administrative or judicial proceedings initiated concerning the violation, including, but not limited to, proceedings initiated by the applicant to obtain administrative or judicial review of the violations;

(4) The current status of the proceedings and of the violation notice; and

(5) The actions, if any, taken by the applicant to abate the violation.

§ 778.15 Right of entry and operation information.

(a) Each permit application shall contain—

(1) A description of those documents upon which the applicant bases his legal right to enter and begin surface mining operations in the permit area and whether that right is the subject of pending litigation, *Provided,* That nothing in this Chapter gives the regulatory authority the jurisdiction to adjudicate property title disputes; and

(2) If requested by the regulatory authority, certified copies of all documents relied upon by the applicant, except that information that specifies amounts of royalty, rent or other payments for rights to mine the coal need not be provided.

(b) Where the private mineral estate to be mined has been severed from the private surface estate:

(1) A copy of the written consent of the surface owner to the applicant for the extraction of coal by surface mining methods; or

(2) A copy of the document of conveyance that expressly grants or reserves the right to the applicant, or its predecessor-in-interest, to conduct the surface coal mining and reclamation operations; or

(3) If the conveyance does not expressly grant the right to conduct surface coal mining and reclamation operations, documentation that under the applicable State law, the applicant has the legal authority to conduct surface coal mining and reclamation operations, *Provided,* That nothing in this section shall be construed to authorize the regulatory authority to adjudicate property rights disputes.

§ 778.16 Relationship to areas designated unsuitable for mining.

(a) Each application shall contain a statement of whether the proposed permit area is within an area designated unsuitable for surface coal mining under 30 CFR part 764 or under study for designation in an administrative proceeding initiated under that part.

(b) If an applicant claims the exemption in 30 CFR 786.13(d)(2), the application shall contain information supporting the applicant's assertion that it made substantial legal and financial commitments before January 4, 1977, concerning the proposed operations.

(c) If an applicant proposes to conduct surface coal mining and reclamation operations within 300 feet of an occupied dwelling, the application shall include a copy of the written consent of the owner of the dwelling for conducting such operations.

§ 778.17 Permit term information.

(a) Each permit application shall state the anticipated or actual starting and termination date of each phase of the mining and reclamation operation and the number of acres to be disturbed in each phase of mining and over the total life of the permit.

(b) If the applicant proposes to conduct the operations beyond a permit term of 5 years, the application shall contain the information needed for the showing required under 30 CFR 786.11(a).

§ 778.18 Personal injury and property damage insurance information.

Each permit application shall contain either a certificate of insurability or evidence that the self-insurance requirements in 30 CFR 806.12 are satisfied.

§ 778.19 Identification of other licenses and permits.

Each permit application shall contain a list of all other licenses and permits needed by the applicant to conduct the proposed mining operation. This list shall identify each license and permit by—

(a) Type of permit or license;

(b) Name and address of issuing authority;

(c) Identification of applications for permit or license or, if issued, the identification number of the permit or license; and

(d) The date of approval or disapproval by each issuing authority.

§ 778.20 Identification of location of public office for filing of application.

Each complete application shall identify, by name and address, the public office where the applicant will simultaneously file a copy of the application for public inspection in accordance with 30 CFR 787.11(d).

§ 778.21 Newspaper advertisement and proof of publication.

(a) Each application shall contain a copy of the newspaper advertisement and proof of publication of the advertisement in accordance with 30 CFR 787.11(a).

(b) The copy of the newspaper advertisement and proof of publication shall be filed not later than one week after the last date of publication required under 30 CFR 787.11(a).

PART 779—SURFACE MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR INFORMATION ON ENVIRONMENTAL RESOURCES IN THE PERMIT AND ADJACENT AREAS

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779.23 Maps, plans, and cross-sections: Preparation.
779.24 Maps: General requirements.
779.25 Cross-section maps and plans.
779.26 Soil resources description.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 506, 507, 508, 510, 515, and 522, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1256, 1257, 1258, 1260, 1265, and 1272).

§ 779.1 Scope.

This part establishes the minimum requirements for the Secretary's approval of provisions of regulatory programs for the contents of applications for surface coal mining activities related to technical information on the existing site of the mine plan area and adjacent area, except for underground coal mining activities.

§ 779.2 Objectives.

The objectives of this part are to insure that—

(a) Each application provides to the regulatory authority a complete and accurate description of the existing premining environmental resources

both within the mine plan area and adjacent areas that may be affected by the proposed surface coal mining activities.

(b) The description is in a form that enables the regulatory authority to make a decision on each application that serves the purposes of the Act.

§ 779.4 Responsibilities.

(a) It is the responsibility of the applicant to provide all information in the application required by this part, except where specifically exempted in this part.

(b) It is the responsibility of State and Federal Government agencies to provide information for applications as specifically required by this Part.

§ 779.11 General requirements.

Each permit application shall include a description of the existing, premining environmental resources both within the mine plan area and adjacent areas that may be affected by the proposed surface mining activities.

§ 779.12 General environmental resources information.

(a) The applicant shall describe the mine plan area and identify the size, sequence, and timing of the sub-areas for which it is anticipated that individual permits for mining will be requested.

(b) Each description shall identify the location and nature of archeological, paleontological, cultural, historic, and unique geological features within the mine plan area and known features in adjacent areas.

(c) Each description shall include a statement of all lands, interests in lands, options or pending bids on such interests held or made by the applicant which lands are within mine plan areas.

§ 779.13 Description of hydrology and geology: General requirements.

(a) Each application shall contain a description of the geology, hydrology, and water quality and quantity of all lands within the mine plan area, the adjacent area and the general area. The description shall include information on the characteristics of all surface and ground waters within the general area, and any water which will flow into or receive discharges of water from the general area. This statement shall be prepared according to sections 779.13-17 and shall conform to the following requirements:

(b) (1) Information on hydrology, water quality and quantity and geology related to hydrology of areas outside the proposed mine plan area shall be provided by the regulatory authority to the extent that this data is available from an appropriate Federal or State agency.

(2) If this information is not available from an appropriate Federal or State agency, the applicant shall gather and submit this information to the regulatory authority as part of the permit application.

(3) The permit shall not be approved by the regulatory authority until this information is available in the application.

§ 779.14 Geology description.

(a) Each plan shall contain a description of the geology within the mine plan area down to the deepest groundwater aquifer to be disturbed below the lowest coal seam to be mined by the proposed mining and reclamation operations, including all materials to be disturbed by such operations. Geology shall also be described for all strata below the coal seam to the extent that the strata will be disturbed by the proposed operations.

(b) (1) Test borings and core samples from the mine plan area shall be collected and analyzed to provide the following data: Location of subsurface water; logs of the drill holes showing the thickness of the overburden and coal seams; physical property analyses of the overburden and coal seams physical property analyses of the overburden, including size analysis, compaction, and erodibility; chemical analysis of the overburden and strata lying immediately underneath the lowest coal seam to be mined; anlayses of the coal seam(s), including, but not limited to, an analysis of sulfur content.

(2) An applicant may request that the requirement for a statement of the results of the test borings or coal samplings from the permit area be waived by the regulatory authority. The waiver may be granted only if the regulatory authority makes a written determination that the statement is unnecessary because other equivalent information is accessible in a satisfactory form.

§ 779.15 Ground-water hydrology and geology.

Ground-water hydrology shall be fully described, including, but not limited to, the lithology, thickness, depth to water, permeability, transmissibility, production data, quantity and quality of water, and interrelationships with other aquifers and surface waters, for each aquifer to be disturbed or affected by mining.

§ 779.16 Surface and ground-water information.

(a) Each permit application shall set forth surface and ground-water information including the location of all streams, lakes, ponds, wells, and springs, and descriptions of existing surface and underground drainage patterns throughout the year within the mine plan area and adjacent areas.

(b) Surface water information shall include—

(1) Minimum, maximum, and average depth and rate of flow conditions, establishing critical low flows and peak discharge rates of streams for a minimum of one water-year; and

(2) Water quality data establishing the characteristics of such waters in, discharging into, or which will receive flows of surface or ground water from affected areas within the proposed permit area, through all seasonal variations, showing—

(i) Total dissolved solids in milligrams per liter;

(ii) Total suspended solids in milligrams per liter;

(iii) Acidity;

(iv) pH in standard units;

(v) Total and dissolved iron in milligrams per liter;

(vi) Total manganese in milligrams per liter; and

(vii) Such other information as the regulatory authority determines is relevant.

§ 779.17 Alternative water supply information.

Each permit application shall identify—

(a) The sources of water supply that could be developed to replace the water supply of an owner of interest in real property within the mine plan area and adjacent area;

(b) Persons who obtain water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source within the mine plan area and adjacent area; and

(c) The probable extent to which an owner's supply will be affected by contamination, dimunition, or interruption proximately resulting from the proposed surface coal mining and reclamation operations.

§ 779.18 Climatological and air quality data.

When requested by the regulatory authority, the permit application shall contain a statement of the climatological and air quality factors that are representative of the mine plan area including—

(a) The average seasonal precipitation;

(b) The average direction and velocity of prevailing winds;

(c) Seasonal temperatures; and

(d) Total suspended particulates.

§ 779.19 Vegetation data.

(a) The permit application shall contain a statement of the location of lands proposed for use as the reference area by which the success of postmining revegetation within the permit area is to be determined.

(b) This statement shall include a description of the vegetative cover, density and productivity of the reference area. If required by the regulatory authority, the permit application shall include a map of existing vegetation and supporting narrative that delineates and describes those areas of different vegetation or plant communities within the proposed permit and reference areas. This description shall include information adequate to predict the potential for re-establishing vegetation as required by 30 CFR 816.111 through 816.117.

(c) The area to be mapped shall also include sufficient adjacent areas to allow evaluation of vegetation as important habitat for fish and wildlife, for those species of fish and wildlife identified under 30 CFR 779.20.

§ 779.20 Fish and wildlife resources information.

(a) The permit application shall contain a statement of the results of a study of the populations of fish and wildlife species within the mine plan area and adjacent areas.

(b) The species of fish and wildlife shall be studied in the detail required by the regulatory authority, according to—

(1) Published data or other information from secondary sources, as opposed to newly gathered field data; or

(2) Alternative written guidance provided by applicable State and Federal fish and wildlife management agencies.

§ 779.21 Analyses of selected overburden or topsoil mixtures.

Where the applicant proposes to use selected overburden materials instead of, or as a supplement to topsoil in order to comply with the topsoil handling requirements of 30 CFR 816.22, the application shall contain the results of any analyses, trials and tests required by the regulatory authority under that section.

§ 779.22 Land-use description.

(a) The permit application shall contain a statement of the condition, capacity, and productivity of the land within the proposed mine plan area.

(b) The statement shall include a map and supporting narrative of the uses of the land existing at the time of the filing of the application. If the premining use of the land was changed within 5 years before the anticipated date of beginning the proposed operations, the historic use of the land shall also be described. If the land has been previously mined, the uses which preceded mining shall be described.

(c) The statement shall include a land capability and productivity synthesis which includes a compilation of the land-use description under paragraphs (a) and (b) of this section with other environmental resources information required under this part. The synthesis shall provide analysis of:

(1) The capability of the land before any mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative covers and the hydrology of the site.

(2) The productivity of the land before mining, with the average yield of food, fiber, forage, or wood products from such lands obtained under high levels of management; and

(3) A statement of whether the land has been previously mined, and, if so, the following information, to the extent obtainable—

(i) The type of mining method used;

(ii) The coal seams or other mineral strata mined;

(iii) The extent of coal or other minerals removed; and

(iv) The dates of past mining.

§ 779.23 Maps, plans, and cross-sections: Preparation.

(a) Maps, plans and cross-sections included in a permit application which are required by section 779.25 shall be prepared by or under the direction of, and certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture.

(b) Maps shall be at an appropriate scale, clearly showing the land within the mine plan area and adjacent areas, and include all the types of information set forth on topographical maps of the U.S. Geological Survey of a scale of 1:25,000 or larger.

§ 779.24 Maps: General requirements.

The description shall include maps, prepared in accordance with section 779.23, showing:

(a) All boundaries of lands and names of present owners of record of lands, both surface and sub-surface, included in the proposed mine plan area and adjacent areas;

(b) The boundaries of land within the proposed mine plan area upon which the applicant has the legal right to enter and begin surface mining operations;

(c) The boundaries of all lands to be mined over the estimated total life of the proposed mining operations, with a description of size, sequence, and timing of the mining of subareas for which it is anticipated that additional permits will be sought;

(d) The location of all buildings on and within 1,000 feet of the proposed mine plan area, with identification of the current use of the buildings.

(e) The location of surface and subsurface improvements within, or passing through or over the proposed mine plan area, including, but not limited to fences, electric power, and telephone lines, pipelines, water, oil or gas wells, drainage tile fields, and other manmade features;

(f) The location and boundaries of proposed reference areas for determining the success of revegetation;

(g) The locations of water-intakes for current users of surface waters flowing into, out of, or which will receive discharges from affected areas in the proposed mine plan area;

(h) Each highway and road located in or within 100 feet of the proposed mine plan area;

(i) All existing public parks, archeological, paleontological, cultural, historical, and unique geological features within the proposed mine plan area and known features in adjacent areas;

(j) Each public or private cemetery located in or within 100 feet of the proposed mine plan area;

(k) Any land within the proposed mine plan area which is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System, including study rivers designated under section 5(a) of the Wild and Scenic Rivers Act; and

(l) Any other information required by the regulatory authority.

§ 779.25 Cross-section maps and plans.

The application shall include cross-section maps and plans prepared in accordance with 30 CFR 779.23 and updated on an annual basis, showing elevation and location of test borings core samplings, monitoring stations for water quality and quantity, air quality, and fish and wildlife used in preparation of the application, and showing the following information—

(a) Nature, depth, and thickness of the various strata of coal to be mined, coal or rider seams above the seam to be mined, overburden, and strata immediately below the lowest coal seam to be mined;

(b) All mineral crop lines and the strike and dip of the coal to be mined within the proposed mine plan area and adjacent areas;

(c) Location and extent of workings of known underground mines, including mine openings to the surface areas affected by such mines, within the proposed mine plan area and adjacent areas;

(d) Location and extent of sub-surface water, if encountered, within the proposed mine plan area or adjacent areas, including, but not limited to: aquifers and piezometric surfaces thereof through seasonal variations, the flow patterns of such sub-surface water, and the estimated elevations and contours of ground-water tables;

(e) Location, elevation and dimensions of springs, constructed or natu-

ral surface water, streams, drainways, or irrigation ditches within the proposed mine plan area or adjacent areas;

(f) Location and elevation of discharge of industrial wastes to surface or ground-waters within the proposed mine plan area, or at points in adjacent areas to surface waters which flow into the proposed mine plan area;

(g) Boundaries and elevations of existing or previously surfaced-mined areas within the proposed mine plan area;

(h) Location, elevation and dimensions of existing areas of spoil, waste, refuse and topsoil preservation, dams, other impoundments, and water treatment or air pollution control facilities within the proposed permit area;

(i) Location and depth of water, gas or oil wells within the proposed permit area; and

(j) Sufficient slopes to adequately represent the existing land surface configuration of the mine plan area, measured and recorded according to the following:

(1) Each measurement shall consist of an angle of inclination along the prevailing slope extending 100 linear feet above and below or beyond the coal outcrop or the area to be disturbed; or, where this is impractical, at locations specified by the regulatory authority.

(2) Where the area has been previously mined, the measurements shall extend at least 100 feet beyond the limits of mining disturbances, or any other distance determined by the regulatory authority to be representative of the premining configuration of the land.

(3) Slope measurements shall take into account natural variations in slope so as to provide accurate representation of the range of natural slopes and shall reflect geomorphic differences of the area to be disturbed.

(4) Slope measurements may be made from existing topographic maps showing contour lines, having sufficient detail and accuracy consistent with the submitted mining and reclamation plan.

(5) Contour lines shall be based on intervals of a maximum of 5 feet where the slope of the land is twenty (20) degrees or less and a maximum of 10 feet where slopes are greater than 20 degrees.

§ 779.26 Soil resources description.

(a) A soil map shall be prepared that delineates those portions of the mine plan area of different soil morphology and soil environment. The soil map shall provide adequate information to establish present and potential productivity levels of the land and to aid in the classification, stockpiling, and use of soil materials during mining and reclamation operations. The soil resources description shall also provide adequate information to predict the potential for reestablishing vegetation and the proposed postmining use.

(b) The applicant shall supply such other information as required by the regulatory authority.

PART 780—SURFACE MINING PERMIT APPLICATION—MINIMUM REQUIREMENT FOR RECLAMATION AND OPERATION PLAN

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780.35 Disposal of excess spoil.
780.37 Transportation facilities.

AUTHORITY: Sections 102, 201, 501, 503, 504, 506, 507, 508, 509, 510, 515, 517, and 522, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1256, 1257, 1258, 1259, 1260, 1265, 1267, and 1272.)

§ 780.1 Scope.

This part provides the minimum requirements for the Secretary's approval of provisions of regulatory programs for the mining operations and reclamation plan portions of applications for surface coal mining activities permits, except to the extent that different requirements for those plans are established under part 785 of this subchapter.

§ 780.2 Objectives.

The objectives of this part are to establish the minimum requirements under regulatory programs for the contents of mining and reclamation plan portions of applications for permits, so that the regulatory authority is provided with comprehensive and reliable information on proposed surface coal mining and reclamation operations, and to insure that such operations are allowed to be conducted only in compliance with the Act, this chapter, and the regulatory program.

§ 780.4 Responsibilities.

(a) It is the responsibility of the applicant to provide to the regulatory authority all of the information required by this part, except where specifically exempted in this part.

(b) It is the responsibility of State and Federal governmental agencies to provide information to the regulatory authority where specifically required in this part.

§ 780.11 Operation plan: General requirements.

Each application shall contain a description of the proposed mining operations within the mine plan area, including, at a minimum, the following:

(a) A narrative description of the type and method of coal mining procedures and proposed engineering techniques, anticipated annual and total production of coal, by tonnage, and the major equipment used or proposed to be used for all aspects of such operations.

(b) A narrative explaining the construction, modification, use, maintenance, and removal of the following facilities within the proposed mine plan area:

(1) Major buildings and other facilities;

(2) Utilities services;

(3) Dams and impoundments;

(4) Overburden and topsoil handling and storage areas and structures;

(5) Coal removal, handling, storage, cleaning, and transportation areas and structures;

(6) Waste and refuse removal, handling, storage, transportation, and disposal areas and structures;

(7) Mine facilities and layout; and

(8) Water and air pollution control facilities.

§ 780.12 Operations plan: Blasting.

Each application shall contain a blasting plan for the affected area, explaining how the applicant intends to comply with the requirements of 30 CFR sections 816.61 through 816.68 and including the following information:

(a) Types and approximate amounts of explosives to be used for each type of blasting operation to be conducted;

(b) Description of procedures and plans for recording and reporting to the regulatory authority blasting information to be collected during the operation. The plan shall contain the following information—

(1) Drilling patterns, including size, numbers, depths, spacing, and configuration of holes;

(2) Charge and packing, placement of holes;

(3) Types of fuses and detonation controls; and

(4) Sequence and timing of firing holes.

(c) Description of blasting warning and site access control equipment and procedures;

(d) Description of types, capabilities, sensitivities, and locations of use of blasting monitoring equipment and procedures; and

(e) Description of plans for recording and reporting to the regulatory authority the results of preblasting surveys, if required, and of the blasting monitoring program.

§ 780.13 Operations plan: Maps and plans.

Each map, plan, and cross-section shall delineate the location on the permit area where the performance standards in 30 CFR 816 apply. Areas that were mined under the initial regulatory program or that were mined before February 3, 1978 shall also be delineated on the map. Each application shall contain maps, plans, and cross-sections of the permit area in accordance with the following provisions:

(a) Maps and plans shall have a scale of 1:25,000 or larger. Cross-sections shall have a scale prescribed by the regulatory authority. The maps, plans, and cross-sections shall show the mining operations to be conducted and the lands to be affected throughout the operation.

(b) Any change in a facility or feature caused by the proposed mining operation shall be described if the facility or feature was shown on the map and plan required by 30 CFR 779.24 and 779.25.

(c) The following shall be shown and, for subparagraphs 5, 6, 10, and 13 of this paragraph the maps and plans shall be prepared by, or under the direction of, and certified by a qualified professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture.

(1) Buildings, utility corridors and facilities to be used within the mine plan area;

(2) The area of land to be affected within the permit area, according to the sequence of mining and reclamation;

(3) Each coal storage, cleaning and loading area;

(4) Each topsoil, overburden, refuse, spoil, and waste storage area;

(5) Each water diversion, collection, conveyance, treatment, storage, and discharge facility to be used;

(6) Each air pollution collection and control facility;

(7) Each source of and facility relating to coal processing and pollution control waste disposal;

(8) Each facility to be used to protect and enhance fish and wildlife and related environmental values;

(9) Each explosive storage and handling facility;

(10) Locations, design, and construction specifications of each sedimentation pond, permanent water impoundment, coal processing waste bank, and coal processing waste dam and embankments in accordance with 30 CFR 780.25 and disposal of excess spoil in 30 CFR 780.35.

(11) Each profile, at cross-sections specified by the regulatory authority, of the anticipated final surface configuration to be achieved for the affected areas;

(12) Location of each water and air quality, and wildlife monitoring point; and

(13) Location and specifications for each facility that will remain on the mine plan area as a permanent feature, after the completion of surface coal mining and reclamation operations.

§ 780.14 Air pollution control plan.

(a) For those operations with projected production rates exceeding 1,000,000 tons of coal per year and located west of the 100th meridian west longitude, the application shall contain an air pollution control plan which includes the following:

(1) An air quality review demonstrating that total suspended particulate matter emissions from the proposed surface coal mining operation, in conjunction with all other applicable particulate matter emission increases or reductions, would not cause or contribute to exceedances of any national ambient air quality standard in any air quality control region; or cause or contribute to exceedances of other applicable Federal or State air quality standards;

(2) An ambient air quality monitoring program to provide adequate annual and 24 hour total suspended particulate matter sampling data to evaluate the ambient air quality impact of the surface coal mining operation. (See 40 CFR 50.7).

(3) A plan for fugitive dust control practices as required under section 816.95, of subchapter K and necessary to achieve and maintain national ambient air quality standards and other applicable Federal and State air quality standards.

(b) For those operations with projected production rates less than or equal to 1,000,000 tons of coal per year and located west of the 100th meridian west longitude, the application shall contain an air pollution plan which includes the following:

(1) An air quality review, if, as determined by the regulatory authority, the applicants proposed surface coal mining operation, in conjunction with other existing and proposed major emitting facilities in the air quality control region or subregion, may:

(i) Cause or contribute to exceedances of any national ambient air quality standard in any air quality control region; or

(ii) Cause or contribute to exceedances of any other applicable Federal or State air quality standard;

(2) An ambient air quality monitoring program to provide adequate annual and 24 hour total suspended particulate matter sampling data to evaluate the ambient air quality impact of the surface coal mining operation. (See 40 CFR 50.7);

(3) A plan for fugitive dust control practices as required under section 816.95 of subchapter K and necessary to achieve and maintain National Ambient Air Quality Standards and other applicable Federal and State air quality standards.

(c) For those operations located east of the 100th meridan west longitude, each application shall contain an air pollution control plan which includes the following:

(1) An air quality review, if, as determined by the regulatory authority, the applicant's proposed surface coal mining operation, in conjunction with other existing or proposed major emitting facilities in the air quality control region or subregion, may:

(i) Cause or contribute to exceedances of any national ambient air quality standard in any air quality control regions, or

(ii) Cause or contribute to exceedances of any other applicable Federal or State air quality standards;

(2) An ambient air quality monitoring program, if, as determined by the regulatory authority, necessary to provide adequate annual and 24 hour total suspended particulate matter sampling data to evaluate the ambient air quality impact of the surface coal mining operation; (See 40 CFR 50.7)

(3) A plan for fugitive dust control practices as required under section 816.95 of subchapter K and necessary to achieve and maintain National Ambient Air Quality Standards and other applicable Federal and State air quality standards.

§ 780.15 Fish and wildlife plan.

Each application shall contain a fish and wildlife plan, which provides:

(a) A statement of how the applicant proposes to use the best technology currently available for the site so that affected areas are reclaimed to a condition which will enhance fish, wildlife, and related environmental values.

(b) If the applicant determines that it will not be practicable to achieve a condition which clearly shows a trend toward enhancement of fish and wildlife resources at the time revegetation has been successfully accomplished under 30 CFR 816.111 through 816.117, the applicant shall state—

(1) Why it is not practicable to achieve such a condition; and

(2) How the condition which is achieved uses the best technology currently available to minimize adverse impacts on fish, wildlife, and related environmental values.

(c) (1) Statements from the applicable State and Federal fish and wildlife agencies on which impact control measures, management techniques, and monitoring methods, if any, are recommended for the site.

(2) If a State or Federal fish and wildlife management agency fails to respond to the applicant's written request for such a statement within 6 weeks, the applicant need not include that statement as part of the application.

(d) A statement explaining how the applicant will utilize impact control measures, management techinques, and monitoring methods to protect or enhance the following, if they are affected by the operation:

(1) Critical habitats of threatened or endangered species of plants or animals listed by the Secretary;

(2) Other species such as eagles, migratory birds or game animals, protected by State or Federal law, and their habitats;

(3) Habitat types of unique value for fish and wildlife, such as wetlands, riparian areas, cliffs supporting raptors, areas offering unique shelter or protection, reproduction and nursery areas, and wintering areas.

§ 780.17 Reclamation plan: Introduction.

Each application shall contain a plan for reclamation of the lands within the permit area and adjacent areas, showing how the applicant will comply with section 515 of the act, subchapter K of this chapter and the environmental protection performance standards of the regulatory program. The plan shall include at a minimum all information required under 30 CFR 780.19 through 780.35. All maps, plans and applicable cross sections shall delineate the location on the permit area where the performance standards of 30 CFR 816 apply. Areas that were mined under the initial regulatory program or that were mined before February 3, 1978 shall also be delineated on the map.

§ 780.19 Reclamation plan: General requirements.

Each plan shall contain:

(a) A detailed timetable for the accomplishment of each major step in the reclamation plan;

(b) A detailed estimate of the cost of reclamation of the proposed operations required to be covered by a performance bond under subchapter J of this chapter, with supporting calculations for the estimates;

(c) A plan for backfilling, soil stabilization, compacting, and grading, with cross sections that show the anticipated soil surface configuration of the permit area in accordance with sections 816.101 through 816.106;

(d) A plan for topsoil handling and replacement and for revegetation of the areas affected by surface mining activities in accordance with sections 816.21 through 816.25 and sections 816.111 through 816.117 including, but not limited to, descriptions of:

(1) Timing of revegetation steps;

(2) Species of plants and trees to be used;

(3) Methods and amounts of seed or numbers of seedlings to be planted per acre;

(4) Mulching techniques;

(5) Irrigation, if appropriate, and pest and disease control measures, if any;

(6) Measures proposed for comparison of revegetation of the permit area with the reference area; and

(7) A soil testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation;

(e) A description of the measures selected for conducting the mining operation so that maximum use and conservation of the coal resource is ensured to minimize the need to remine the land in the future;

(f) A description of measures to be employed to insure that all debris, acid-forming and toxic-forming, or materials constituting a fire hazard are disposed of in accordance with 30 CFR 816.103;

(g) A description, including appropriate cross sections and maps, of the measures to be used to seal mine openings, and plug, case or manage drill and other bore holes within the proposed permit area in accordance with 30 CFR 816.11 through 816.14;

(h) A description of how mining and other equipment and facilities will be removed from the permit area when no longer needed in accordance with 30 CFR 816.121-816.122; and

(i) A description of steps to be taken during the term of the permit to comply with the requirements of the Clean Air Act (42 U.S.C. sec. 7401 et seq.), the Clean Water Act (33 U.S.C. sec. 1251 et seq.), and other applicable air and water quality laws and regulations and any applicable health and safety standards.

§ 780.21 Reclamation plan: Protection of hydrologic balance.

(a) Each plan shall contain a detailed description, with appropriate maps and cross section drawings, of the measures to be taken during and after the mining and reclamation process, in accordance with 30 CFR 816, to ensure the protection of:

(1) The quality of surface and ground water systems, both within the mine plan area and adjacent areas, from the adverse effects of the surface coal mining and reclamation operations;

(2) The rights of present users to surface and ground water; and

(3) The quantity of surface and ground water both within the mine plan area and adjacent area from the adverse effects of the surface coal mining and reclamation operation, and to provide alternative sources of water where the protection of quantity cannot be ensured.

(b) The description shall include the following:

(1) A plan for the control of surface and ground water drainage into, through and out of the area to be affected by the mining operation;

(2) A plan for the treatment, where required under subchapter K and the regulatory program, of surface or ground water drainage from the area to be disturbed by the mining operation, and proposed quantitative limits on pollutants in discharges of the drainage according to the more stringent of the following:

(i) Subchapter K and the regulatory program, or;

(ii) Other applicable State and Federal laws;

(3) A plan for the restoration of the water recharge capacity of the mine plan area to its approximate premining condition; and

(4) A plan for the collection, recording, and reporting of ground and surface water quality and quantity data according to the performance standards of subchapter K and the regulatory program and providing for:

(i) Adequate monitoring of all discharge from the affected area;

(ii) Adequate data to describe the likely daily and seasonal variation in discharges from the affected area in terms of water flow, pH, total iron, total manganese, and total suspended solids and, if requested by the regulatory authority, any other parameter characteristic of the discharge;

(iii) Monitoring at appropriate frequencies to measure normal and abnormal variations in concentration;

(iv) An analytical quality control system including standard methods of analysis such as those specified in 40 CFR 136; and

(v) A regular report of all measurements to the regulatory authority within 60 days of sample collection unless violations of permit conditions occur in which case the regulatory authority shall be notified immediately after receipt of analytical results by the permittee. If the discharge is subject to regulations by a Federal or State permit issued in compliance with the Clean Water Act of 1972 (33 U.S.C.

sec. 1251-1378), a copy of the completed reporting form supplied to meet the permit requirements may be submitted to the regulatory authority to satisfy the reporting requirements if the data meet the sampling frequency and other requirements of this paragraph.

(c) The description shall include a statement of the:

(1) Probable hydrologic consequences of the proposed mining and reclamation operations, both off and on the mine site with respect to the hydrologic regime, quantity and quality of water in surface and groundwater systems under all seasonal conditions, including the contents of dissolved and total suspended solids, total iron, pH, total manganese, and other parameters required by the regulatory authority; and

(2) Probable cumulative impacts of all anticipated mining in the general area around the proposed operations upon the hydrology of the area and particularly upon water availability.

(d) Information required under paragraph (c) with respect to hydrology, water quality and quantity and geology related to hydrology of areas outside the proposed mine plan area shall be provided by the regulatory authority to the extent that this information is available from an appropriate Federal or State agency. If this information is not available from a Federal or State agency, the applicant shall gather and submit this information to the regulatory authority as part of the permit application. The permit shall not be approved by the regulatory authority until this information is available in the application to enable the regulatory authority to make an adequate assessment of the impact on the hydrologic balance under this section.

§ 780.23 Reclamation plan: Post-mining land uses.

(a) Each plan shall, contain a detailed description of the proposed use of the land following reclamation, including a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land use policies and plans.

(b) The description of the proposed post-mining land use shall set forth the following:

(1) How the proposed post-mining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use;

(2) Where range or grazing is the proposed post-mining use, the detailed management plans to be implemented;

(3) Where a land use different from the pre-mining land use is proposed, all materials needed for approval of the alternative use under 30 CFR 816.124; and

(4) The consideration which has been given to making all of the proposed surface coal mining and reclamation operation consistent with surface owner plans, and applicable State and local land use plans and programs.

(c) The description shall be accompanied by a copy of the comments concerning the proposed use by the legal or equitable owner of record of the surface of the mine plan area and the State and local government agencies which would have to initiate, implement, approve or authorize the proposed use of the land following reclamation.

§ 780.25 Reclamation plan: Ponds, impoundments, banks, dams and embankments.

(a) *General.* Each plan shall contain a description, map, and cross-section drawing of each temporary and permanent sedimentation pond, permanent water impoundment, coal processing waste bank, and coal processing waste dam and embankment, which shall comply with 30 CFR 816.46, 816.49, 816.56, 816.81-816.85, and 816.91 through 816.93. Each plan shall cover geotechnical investigation, design, construction, operation, maintenance, and removal, if appropriate.

(b) *Sedimentation ponds.*

(1) Sedimentation ponds, whether temporary or permanent, shall be designed according to the criteria in 30 CFR 816.46. Any sedimentation pond or earthen structure which will remain on the mine plan area as a permanent water impoundment shall meet the criteria 30 CFR 816.49 and shall be designed according to the criteria established under Pub. L. 83-566 (16 U.S.C. sec. 1006). Each plan shall contain design specifications based on the appropriate precipitation event and shall be approved by a registered professional engineer.

(2) Each plan shall, at a minimum, comply with the requirements of the Mine Health and Safety Administration, 30 CFR 77.216-2, for designing temporary or permanent sedimentation pond or coal processing waste dams or impoundments.

(c) *Coal processing waste banks.* Coal processing waste banks shall be designed to comply with the requirements of 30 CFR 816.81-816.85 and shall be approved by a registered professional engineer.

(d) *Coal processing waste dams and embankments.* Coal processing waste dams and embankments shall be designed to conform with the criteria in 30 CFR 816.91-816.93. Each plan shall contain the results of geotechnical investigation of the proposed dam or embankment foundation area to determine the structural competence of the bedrock foundation material to support the proposed dam or embankment structure and the impounded material. The geotechnical investigation shall be planned and supervised by an engineer or engineering geologist, according to the following:

(1) The number, location and depth of borings on test pits shall be determined with respect to the size of the dam or embankment, quantity of material to be impounded, and subsurface conditions;

(2) The character of the bedrock and proposed abutment sites and any adverse geologic conditions shall be considered as to the particular dam or embankment site and reservoir site;

(3) Each plan shall identify all springs, seepage, and ground water flow observed or anticipated during wet periods in an area of the proposed dam or embankment;

(4) Consideration shall be given to the possibility of mud flows, rock debris falls or other landslide condition into the dam or embankment or into the impounded material; and

(5) A survey shall be made regarding the potential effects of subsidence of the subsurface strata due to past and future mining operations.

(e) Each plan under paragraphs (b) and (d) of this section shall include a stability analysis of each structure, if the structure is at least 20 feet high and impounds more than 200 acre-feet. The stability analysis shall include, but is not limited to, strength parameters, pore pressures, and long-term seepage conditions. The plan shall also contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods.

§ 780.27 Reclamation plan: Surface mining near underground mining.

For a surface mining operation to be conducted within 500 feet of an underground mine, the plan shall describe the measures to be used to comply with the requirements of the regulatory authority and the Mine Health and Safety Administration as required under 30 CFR 816.79.

§ 780.29 Diversions.

Each application shall contain descriptions, including maps and cross sections, of stream channel diversions and other diversions constructed to control overland flow around or through the mine plan area in compliance with the performance standards of 30 CFR 816.43-816.44.

§ 780.31 Protection of public parks and historic places.

For any public parks or historic places that may be adversely affected by the proposed operations, each plan shall describe the measures to be used

to minimize or prevent the impacts in order to obtain approval of the regulatory authority and other agencies under 30 CFR 761.12(f).

§ 780.33 Relocation or use of public roads.

Each plan shall describe, with appropriate maps and cross section drawings, the measures to be used by the applicant to ensure that the interests of the public and landowners affected are protected if, under 30 CFR 761.12(d), the applicant seeks to have the regulatory authority's approval of:

(a) Conducting the proposed operations within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join such right-of-way; or,

(b) Relocating the public road.

§ 780.35 Disposal of excess spoil.

(a) Each plan shall contain descriptions, including appropriate maps and cross section drawings, of the proposed disposal site and design of the spoil disposal structures which shall comply with the requirements in 30 CFR 816.71-816.73. These plans shall cover the geotechnical investigation, design, construction, operation, maintenance, and removal, if appropriate.

(b) Disposal of excess spoil, whether in a valley or head-of-hollow fill structure, shall be designed to conform with the criteria in 30 CFR 816.71-816.73. Each plan shall contain the results of a geotechnical investigation of the proposed disposal site, including the following:

(1) The character of bedrock and any adverse geologic conditions in the disposal area,

(2) A survey identifying all springs, seepage, and ground water flow observed or anticipated during wet periods in the area of the disposal site;

(3) A survey of the potential effects of subsidence of the subsurface strata due to past and future mining operations;

(4) A technical description of the rock materials to be utilized in the construction of those disposal structures containing rock chimmey cores or underlain by a rock drainage blanket; and

(5) A stability analysis including, but not limited to, strength parameters, pore pressures and long-term seepage conditions. These data shall be accompanied by a description of all engineering design assumptions and calculations and shall be accompanied by the alternatives considered in selecting the specific design parameters and methods.

(c) In steep slope areas where rock-toe buttresses and spoil embankments are required to ensure the stability of the spoil disposal structures, these additional requirements shall be complied with:

(1) The number, location, and depth of borings or test pits shall be determined with respect to the size of the spoil disposal structure and subsurface conditions; and

(2) The engineering parameters utilized to design the rock-toe buttress and spoil embankment shall be determined in accordance with paragraph (b)(5) of this section.

(d) These engineering analyses shall be performed by a registered professional engineer, engineering geologist or other qualified person. All on-site geotechnical investigations shall be supervised by an engineer or engineering geologist.

§ 780.37 Transportation facilities.

Each plan shall contain a description of each road, conveyor or rail system to be constructed, used, or maintained within the mine plan area. The description shall include a map and an appropriate cross section plan and shall include the following:

(a) Specifications for each road width, road gradient, road surface, road cut, fill embankment, culvert, bridge, drainage ditch, and drainage structure.

(b) A report of appropriate geotechnical analysis where approval of the regulatory authority is required for steep cut slopes under 30 CFR 816.32(b)(2).

(c) A description of measures to be taken for alteration or relocation of a natural drainway for approval by the regulatory authority under 30 CFR 816.32(b)(4).

(d) A description of material, other than a rock headwall, to be used for protection of the inlet end of a ditch relief culvert, for approval by the regulatory authority under 30 CFR 816.32(c)(3).

(e) A description of measures to be taken to obtain approval of the regulatory authority for construction of a road embankment over 15 feet in height over a stream under 30 CFR 816.32(d).

PART 782—UNDERGROUND MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Sec.

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AUTHORITY: Secs. 102, 201, 501, 503, 504, 506, 507, 508, 509, 510, 515, 516, and 522 of Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. Secs. 1201, 1211, 1251, 1253, 1254, 1256, 1257, 1258, 1259, 1260, 1265, 1266, 1272).

§ 782.1 Scope.

This part establishes the minimum requirements for the Secretary's approval of regulatory program provisions regarding legal, financial, compliance and general information that must be contained in permit applications for underground mining activities.

§ 782.2 Objectives.

The objective of this part is to ensure that all relevant information regarding the ownership and control of the person who conducts any underground mining activities, the ownership and control of the property to be affected by the operations, the compliance status and history of such persons, and other important information is provided to the regulatory authority before a decision to issue or deny a permit.

§ 782.4 Responsibilities.

It is the responsibility of the permit applicant to provide to the regulatory authority all of the information required by this part.

§ 782.5 Definitions.

As used in this part, principal shareholder means any person who is the owner of record of 10 percent or more of any class of voting stock.

§ 782.11 Applicability.

This part applies to any person who applies for a permit to conduct underground mining activities.

§ 782.13 Identification of interests.

(a) Each application shall contain the names and addresses and telephone numbers of—

(1) The permit applicant;

(2) Every legal or equitable owner of record of the property to be mined;

(3) The holders of record of any leasehold interest in the property to be mined;

(4) Any purchaser of record under a real estate contract of the property to be mined;

(5) The operator, if the operator is a person different from the applicant; and

(6) The resident agent of the applicant who will accept service of process.

(b) Each application shall contain a statement of whether the applicant is

a corporation, partnership, single proprietorship, association or other business entity. For businesses other than single proprietorships, the application shall contain the following information, where applicable:

(1) Names and addresses of every officer, partner, director or other person performing a function similar to a director of the applicant;

(2) Name and address of any person who is a principal shareholder of the applicant; and

(3) Names under which the applicant, partner, or principal shareholder previously operated a surface mining operation in the United States within the 5 years preceding the date of application.

(c) If any owner of record, holder of record, purchaser of record or operator identified under paragraph (a) of this section is a business entity other than a single proprietor, the application shall contain the names and addresses of their principals, officers, and resident agents.

(d) Each application shall contain a statement of any current or previous coal mining permits in the United States held by the applicant and by any person identified in paragraph (b)(3) of this section and of any pending permit application to conduct coal mining operations in the United States. The statement shall include a list by permit or application number, regulatory authority, and State for each such coal mining operation.

(e) Each application shall contain the names and addresses of the owners of record of all surface and subsurface areas contiguous to any part of the proposed permit area.

(f) Each application shall contain the name of the mine, if any, and the Mine Safety and Health Administration identification number for the mine and all sections of the mine.

§ 782.14 Compliance information.

(a) Each application for permit shall contain a statement of whether the applicant, any subsidiary, affiliate or persons controlled by or under common control with the applicant has:

(1) Held a Federal or State mining permit, which in the 5-year period prior to the date of submission of the application has been suspended or revoked; or

(2) Has forfeited a coal mining bond or similar security deposited in lieu of bond.

(b) If a suspension, revocation or forfeiture has occurred, each application shall contain a statement of the facts involved, including:

(1) Identification, by number and date of issuance, of the permit or date and amount of bond or similar security;

(2) Identification of the authority that suspended, revoked or forfeited and the stated reasons for the action by that authority;

(3) The current status of the permit, bond or similar security involved;

(4) The date, location and type of any administrative or judicial proceedings initiated concerning the suspension, revocation, or forfeiture; and

(5) The current status of these proceedings.

(c) Each application shall contain a schedule listing violation notices of the Act and of any law, rules, or regulation of the United States or of any State or Federal department or agency in the United States pertaining to air or water environmental protection incurred by the applicant, in connection with any coal mining operation during the 3-year period before the application date. The application shall also contain a statement regarding each violation notice including—

(1) The date of issuance and identity of the issuing regulatory authority, department, or agency;

(2) A brief description of the particular violation alleged in the notice;

(3) The date, location and type of any administrative or judicial proceedings initiated concerning the violation, including, but not limited to, proceedings initiated by the applicant to obtain administrative or judicial review of the violations;

(4) The current status of the proceedings and of the violation notice; and

(5) The actions, if any, taken by the applicant to abate the violation.

§ 782.15 Right of entry and operation information.

(a) Each permit application shall contain a description of those documents upon which the applicant loses his legal right to enter and begin underground mining activities in the permit area and whether that right is the subject of pending court litigation. Nothing in this chapter gives the regulatory authority the jurisdiction to adjudicate property title disputes.

(b) If requested by the regulatory authority, each application shall contain a certified copy of each document the applicant relies upon. This does not include information that specifies amounts of royalty, rent or other payments for rights to mine the coal.

(c) For underground mining operations where the associated surface operations involve surface mining of coal and where private mineral estate to be mined has been severed from the private surface estate; the application shall contain—

(1) A copy of the written consent of the surface owner to the applicant for the extraction of coal by surface mining methods; or

(2) A copy of the document of conveyance that expressly grants or reserves the right to the applicant, or its predecessor-in-interest, to conduct the surface coal mining and reclamation operations; or

(3) If the conveyance does not expressly grant the right to conduct surface coal mining and reclamation operations, documentation that under the applicable State law, the applicant has the legal authority to conduct surface coal mining and reclamation operations. Nothing in this paragraph gives the regulatory authority the jurisdiction to adjudicate property rights disputes.

§ 782.16 Relationship to areas designated unsuitable for mining.

(a) Each application shall contain a statement of whether the proposed permit area is within an area designated unsuitable for underground mining activities under 30 CFR Part 764 or under study for designation in an administrative proceeding initiated under that part.

(b) If an applicant claims the exemption in 30 CFR 786.13(d)(2), the application shall contain information supporting the applicant's assertion that it made substantial legal and financial commitments before January 4, 1977, concerning the proposed operations.

(c) If an applicant proposes to conduct surface aspects of underground mining activities within 300 feet of an occupied dwelling, the application shall include a copy of the written consent of the owner of the dwelling for conducting such operations.

§ 782.17 Permit term information.

(a) Each permit application shall contain the anticipated or actual starting and termination date of each phase of the underground mining activities, and the number of acres of surface to be disturbed in each phase of mining and over the total life of the permit.

(b) If the applicant proposes to conduct the activities beyond a permit term of 5 years, the application shall contain the information needed for the showing required under 30 CFR 786.11(a).

§ 782.18 Personal injury and property damage insurance information.

Each permit application shall contain either a certificate of insurance or evidence of satisfaction of other self-insurance requirements according to 30 CFR 806.13.

§ 782.19 Identification of other licenses and permits.

Each permit application shall contain a list of all other licenses and permits needed by the applicant to conduct the proposed mining operation.

This list shall identify each license and permit by—

(a) Type of permit or license;

(b) Name and address of issuing authority;

(c) Identification number of application for permit or license or, if issued, the identification number of the permit or license; and

(d) The date of approval or disapproval action by each issuing authority.

§ 782.20 Identification of location of public office for filing of application.

Each application shall identify, by name and address, the public office where the applicant will simultaneously file a copy of the application for public inspection in accordance with 30 CFR 787.11(d).

§ 782.21 Newspaper advertisement and proof of publication.

(a) Each application shall contain a copy of the newspaper advertisement and proof of publication of the advertisement in accordance with 30 CFR 787.11(a).

(b) The copy of the newspaper advertisement and proof of publication shall be filed not later than 1 week after the last date of publication required under 30 CFR 787.11(a).

PART 783—UNDERGROUND MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR INFORMATION ON ENVIRONMENTAL RESOURCES IN THE PERMIT AND ADJACENT AREAS

Sec.

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783.26 Soil resources description.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 506, 507, 508, 509, 510, 515, 516, 517, and 522, Pub. L. 95-87, 91 Stat. 445. (30 U.S.C. 1201, 1211, 1251, 1253, 1254, 1256, 1257, 1258, 1259, 1260, 1265, 1266, 1267, and 1272).

§ 783.1 Scope.

This part establishes the minimum requirements for the Secretary's approval of provisions of regulatory programs for the contents of applications for permits for underground mining activities related to technical information on the existing site of the mine plan area and adjacent areas.

§ 783.2 Objectives.

The objectives of this part are to insure that:

(a) Each application provides to the regulatory authority a complete and accurate description of the existing premining environmental resources both within the mine plan area and adjacent areas that may be affected by the proposed underground mining activities.

(b) The description is in a form that enables the regulatory authority to make a decision on an application that serves the purposes of the act.

§ 783.4 Responsibilities.

(a) It is the responsibility of the applicant to provide all information in the application required by this part, except where specifically exempted in this part.

(b) It is the responsibility of State and Federal Government agencies to provide application information as specifically provided for in this part.

(c) The regulatory authority is responsible for developing and implementing a permit system.

§ 783.11 General requirements.

Each permit application shall include a description of the existing, premining environmental resources both within the mine plan area and adjacent areas that may be affected by the underground mining activities.

§ 783.12 General environmental resources information.

(a) The applicant shall describe the mine plan area, the size, sequence and timing of the subareas for which it is anticipated that individual permits for mining will be requested.

(b) Each description shall identify the location and nature of archeological, paleontological, cultural, historic and unique geological features within the mine plan area and known features in adjacent areas.

(c) Each description shall include a statement of all lands, interests in lands, options or pending bids on such interests held or made by the applicant which lands are within the mine plan area or adjacent area.

(e) The descriptive data required in this section shall be graphically displayed on a map at a scale of 1:25,000 or larger.

§ 783.13 Description of hydrology and geology: General requirements.

(a) Each application shall contain a description of the geology, hydrology, and water quality and quantity of all lands within the mine plan area and adjacent area, and the general area, together with the characteristics of all surface and ground waters within the general area, and that water which will flow into or receive discharges of water from the general area. This statement shall be applicable to sections 783.12-783.17 and shall conform to the following requirements:

(b)(1) Information on hydrology, water quality and quantity and geology related to hydrology of areas outside the proposed mine plan area shall be provided by the regulatory authority to the extent that this data is available from an appropriate Federal or State agency.

(2) If this information is not available from the appropriate Federal or State agency, the applicant shall gather and submit this information to the regulatory authority as part of the permit application.

(3) The permit shall not be approved by the regulatory authority until this information is available in the application.

§ 783.14 Geology description.

(a) Each plan shall contain a description of the geology within the mine plan area down to the deepest ground water aquifer affected below the lowest coal seam to be mined by the proposed underground mining activity. The plan shall include a separate description of the geology for surface areas disturbed for the location of surface support facilities, those surface lands overlying coal to be mined and the coal to be mined.

(1) A plan shall be prepared which describes the overburden geology in those areas to be disturbed for the siting of surface support facilities (face-up area) incident to underground mining activities. The plan shall contain a detailed description of the physical and chemical characteristics of the overburden including the following data resulting from analyses of core or outcrop samples:

(i) The location of areas where subsurface water will be exposed at the face-up area;

(ii) The logs of drill holes showing the lithologic characteristics of the overburden;

(iii) The physical properties of the overburden to be disturbed including size analyses, compaction and erodibility; and

(iv) Chemical analyses of the overburden to locate and identify those horizons which contain potential acid-forming or toxic-forming materials.

(2) A plan shall contain a description of the geology for those surface lands within the mine plan area which are underlain by the coal seam to be extracted and the geology of the coal seam itself. The plan shall provide a detailed description of the following:

(i) The depth and classification of the overburden;

(ii) The geologic structure of the overburden;

(iii) A standard rock mechanics analysis of earth materials making up the overburden between the coal and the surface. The analysis shall include but is not limited to, triaxial compressive strength, grainsize analysis, slaking tests in air and in water, and angle of internal friction, for each major lithologic unit overlying the coal;

(iv) Pyritic content and alkalinity potential of the overburden above the coal seam to be mined; and

(v) Pyrite, marcasite and sulfur content of the coal seam.

(b) An applicant may request that the requirements of paragraph (1) and (2)(i-iv) of this section be waived by the regulatory authority. The waiver may be granted only if the regulatory authority makes a written determination that description required is unnecessary because other equivalent information is accessible and in a satisfactory form.

§ 783.15 Ground water hydrology and geology.

Each permit application shall describe the ground water hydrology for the affected area and mine plan area, including, but not limited to the lithology, thickness, depth to water, permeability, transmissivity, production data, quantity and quality of water, and interrelationships with other aquifers and surface waters, for each aquifer to be disturbed or affected by mining.

§ 783.16 Surface and ground water information.

(a) Each permit application shall set forth surface and ground water information including the location of all streams, lakes, ponds, wells and springs, and descriptions of existing surface and underground drainage patterns throughout the year, within the mine plan area and adjacent area.

(b) Surface water information shall include:

(1) Minimum, maximum, and average depth and rate of flow conditions, establishing critical low flows and peak discharge rates of streams for a minimum of 1 water year; and

(2) Water quality data establishing the characteristics of such waters in, discharging into, or which will receive flows of surface or ground water from the affected area within the proposed permit area, through all seasonal variations, showing—

(i) Total dissolved solids in milligrams per liter;

(ii) Total suspended solids in milligram per liter;

(iii) Acidity;

(iv) pH in standard units;

(v) Total and dissolved iron in milligrams per liter;

(vi) Total manganese in milligrams per liter; and

(vii) Such other information as the regulatory authority determines is relevant.

§ 783.17 Alternative water supply.

Each permit application shall identify—

(a) The sources of water supply that could be developed to replace water supplies of an owner of interest in real property within the mine plan area and adjacent areas including:

(1) Persons who obtain supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source within the mine plan area and adjacent area; and

(2) The probable extent to which an owner's supply will be affected, by contamination, dimunition, or interruption proximately resulting from the proposed underground coal mining and reclamation operations and related surface activities.

§ 783.18 Climatological and air quality data.

When requested by the regulatory authority, the permit application shall contain a statement of the climatological and air quality factors that are representative of the mine area, including—

(a) The average seasonal precipitation;

(b) The average direction and velocity of prevailing winds; and

(c) Seasonal temperatures.

§ 783.19 Vegetation data.

(a) The permit application shall contain a statement of the location of lands proposed for use as the reference area, by which the success of post-mining revegetation of lands affected by surface operations and facilities within the mine plan area is to be determined. This statement shall include a description of the vegetative cover, diversity and productivity of the reference area.

(b) If required by the regulatory authority, the permit application shall include a map of existing vegetation and a supporting narrative that delineates and describes those areas of different vegetation or plant communities within the mine plan area and reference areas. This description shall include information adequate to predict the potential for reestablishing vegetation as required by 30 CFR 817.111 through 817.117.

(c) The area to be mapped shall also include sufficient adjacent areas to permit evaluation of vegetation on important habitat for fish and wildlife, for those species of fish and wildlife identified under 30 CFR 783.20.

§ 783.20 Fish and wildlife resources information.

(a) The permit application shall contain a statement of the results of a study of the populations of fish and wildlife species within the mine plan area and adjacent areas.

(b) The species of fish and wildlife shall be studied in the detail required by the regulatory authority, according to—

(1) Published data or other information from secondary sources, as opposed to newly gathered field data; or

(2) Alternative written guidance provided by applicable State and Federal fish and wildlife management agencies.

§ 783.21 Analyses of selected overburden and top soil mixtures.

Where the applicant proposes to use selected overburden materials instead of, or as a supplement to topsoil in order to comply with the topsoil handling requirements of 30 CFR 817.22, the application shall contain the results of any analyses, trials and tests required by the regulatory authority under that section.

§ 783.22 Land use descriptions.

(a) The permit application shall contain a statement of the condition, capacity and productivity of the land within the mine plan area.

(b) The statement shall include a map and supporting narrative of the general uses of the land existing at the time of the filing of the application. If the premining use of the land was changed within 5 years before the anticipated date of beginning the proposed operations, the historic use of the land shall also be described. If the land has been previously mined, the uses which preceded mining shall be described.

(c) The statement shall include a land capability and productivity synthesis which includes a compilation of the land-use description under paragraphs (a) and (b) of this section with other environmental resources information required under this part. The synthesis shall provide analysis of:

(1) The capability of the land before any mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, and vegetative cover;

(2) The productivity of the land before mining, with the average yield

of food, fiber, forage, or wood products from such lands obtained under high levels of management; and

(3) A statement of whether the land has been previously mined, and, if so, the following information, to the extent obtainable—

(i) The type of mining method used;

(ii) The coal seams or other mineral strata mined;

(iii) The extent of coal or other minerals removed; and

(iv) The dates of past mining; and

(4) Such other information required under Subchapter J of this Chapter.

§ 783.23 Maps, plans, and cross-sections. Preparation

(a) Maps, plans and cross-sections included in a permit application and required by Section 783.25 shall be prepared by, or under the direction of, and certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture.

(b) Maps shall be at an appropriate scale, clearly showing the land within the permit area and adjacent areas, and include all the types of information set forth on topographical maps of the U.S. Geological Survey of a scale of 1:25,000 or larger.

§ 783.24 Maps: General requirements.

The description shall include maps, prepared in accordance with Section 783.23, showing:

(a) All boundaries of lands and names of present owners of record of lands, both surface and sub-surface, included in the proposed mine plan area and adjacent areas;

(b) The boundaries of land within the proposed mine plan area upon which the applicant has the legal right to enter and begin underground mining activities;

(c) The boundaries of all lands to be mined over the estimated total life of the proposed mining operations, with a description of size, sequence and timing of the mining of sub-areas for which it is anticipated that additional permits will be sought;

(d) The location of all buildings in and within 1000 feet of the mine plan area, with identification of the current use of the buildings;

(e) The location of surface and subsurface improvements or the mine plan area including, but not limited to fences, electric power and telephone lines, pipelines, water, oil or gas wells, drainage tile fields, and other manmade features;

(f) The location and boundaries of proposed reference areas for determining the success of revegetation;

(g) The locations of water-intakes for current users of surface waters flowing that may be affected by discharges from affected areas in the mine plan area;

(h) Each highway and road located in or within 100 feet of the proposed mine plan area;

(i) All public parks, existing archeological, paleontological, cultural, historical and unique geological features within the proposed mine plan area and known features in adjacent areas;

(j) Each public or private cemetery located in or within 100 feet of the mine plan area;

(k) Any land within the proposed permit area which is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act;

(l) Location of all known active or abandoned mines within the mine plan area and adjacent areas;

(m) Any other information required by the regulatory authority.

§ 783.25 Cross-section maps and plans.

The application shall include cross-section maps and plans prepared in accordance with 30 CFR 783.23 and updated on an annual basis, showing elevation and location of test borings, core samplings, monitoring stations for water quality and quantity and fish and wildlife used in preparation of the application, and showing the following information—

(a) Nature, depth, and thickness of the various strata of coal to be mined, coal or rider seams above the seam to be mined, overburden, and strata immediately below the lowest coal seam to be mined;

(b) All mineral crop lines and the strike and dip of the coal to be mined, within the mine plan area and adjacent areas;

(c) Location and extent of workings of known underground mines, including mine openings to the surface areas affected by such mines, within the mine plan area and adjacent areas;

(d) Location and extent of sub-surface water, if encountered, within the proposed mine plan area or adjacent areas, including, but not limited to: aquifers and piezometric surfaces thereof, through all seasonal variations, the flow patterns of such subsurface water, and the estimated elevations and contours of ground-water tables;

(e) Location, elevation and dimensions of springs, constructed or natural drainways of surface water, streams, or irrigation ditches within the proposed mine plan area or adjacent areas;

(f) Location and elevation of discharge of industrial wastes to surface or ground-waters within the proposed mine plan area, or at points in adjacent areas to surface waters which flow into the proposed mine plan area;

(g) Boundaries and elevations of existing or previously surfaced-mined areas within the proposed mine plan area;

(h) Location, elevation and dimensions of existing areas of spoil, waste, refuse and topsoil preservation, dams, other impoundments, and water treatment or air pollution control facilities within the proposed mine plan area;

(i) Location and depth of water, gas or oil wells within the proposed mine plan area; and

(j) Sufficient slopes to adequately represent the existing land surface configuration of the mine plan area, measured and recorded according to the following:

(1) Each measurement shall consist of an angle of inclination along the prevailing slope extending 100 linear feet above and below or beyond the coal outcrop or the area to be disturbed; or, where this is impractical, at locations specified by the regulatory authority.

(2) Where the area has been previously mined, the measurements shall extend at least 100 feet beyond the limits of mining disturbances, or any other distance determined by the regulatory authority to be representative of the premining configuration of the land.

(3) Slope measurements shall take into account natural variations in slope so as to provide accurate representation of the range of natural slopes and shall reflect geomorphic differences of the area to be disturbed.

(4) Slope measurements may be made from existing topographic maps showing contour lines, having sufficient detail and accuracy consistent with the submitted mining and reclamation plan.

(5) Contour lines shall be based on intervals of a maximum of five (5) feet where the slope of the land is twenty (20) degrees or less and a maximum of ten (10) feet where slopes are greater than twenty (20) degrees.

§ 783.26 Soil resources description.

(a) A soil map shall be prepared that delineates those portions of the mine plan area of different soil morphology and soil environment. The soil map shall provide adequate information to establish present and potential productivity levels of the land and to aid in the classification, stockpiling and use of soil materials during mining and reclamation operations. The soil resources description shall also provide adequate information to predict the potential for reestablishing vegetation and the proposed post-mining use.

(b) The applicant shall supply such other information as may be required by the regulatory authority.

PART 784—UNDERGROUND MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR RECLAMATION AND OPERATION PLAN

Sec.

784.1 Scope.
784.2 Objectives.
784.4 Responsibilities.
784.11 Reclamation and operations plan: Introduction.
784.12 Reclamation and operations plan: General requirements.
784.13 Protection of hydrologic balance.
784.14 Reclamation and operations plan: Post-mining land uses.
784.15 Reclamation and operations plan: Ponds, impoundments, banks, and embankments.
784.16 Protection of public parks and historic places.
784.17 Relocation or use of public roads.
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784.20 Protection of fish and wildlife.
784.21 Diversions.
784.22 Maps and plans.
784.23 Transportation facilities.
784.25 Return of coal processing waste to abandoned underground workings.

AUTHORITY: Secs. 102, 201, 501(b), 503, 504, 506, 507, 508, 509, 510, 515, 516, 517, and 522 of Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1201, 1202, 1211, 1251, 1253, 1254, 1256, 1257, 1258, 1259, 1260, 1265, 1266, 1267, 1267 and 1272).

§ 784.1 Scope.

This Part provides the minimum requirements for the Secretary's approval of provisions of regulatory programs for the mining operations and reclamation plans portions of permit applications for underground coal mining activities under those programs, except to the extent that different requirements are established for those plans under Part 785 of this Subchapter.

§ 784.2 Objectives.

The objectives of this Part are to establish the minimum requirements under regulatory programs for the contents of mining and reclamation plan portions of applications for permits, so that the regulatory authority is provided with comprehensive and reliable information on proposed underground coal mining and reclamation operations, and to insure that such operations are allowed to be conducted only in compliance with the Act, this Chapter and the regulatory program.

§ 784.4 Responsibilities.

(a) It is the responsibility of the applicant to provide to the regulatory authority all of the information required by this Part, except where specifically exempted in this Part.

(b) It is the responsibility of State and Federal governmental agencies to provide information to the regulatory authority where specifically required in this Part.

§ 784.11 Reclamation and operations plan introduction.

(a) Each application shall contain a plan of the proposed mining and reclamation operations, showing how the applicant will comply with all applicable requirements of Sections 515 and 516 of the Act, Subchapter K and the regulatory program.

(b) Each map, plan and cross-section shall delineate the location on the permit area where the performance standards in 30 CFR 817 apply. Areas that were mined under the initial regulatory program or that were mined before February 3, 1978 shall also be delineated on the map.

§ 784.12 Reclamation and operations plan: General requirements.

Each plan shall contain—

(a) A narrative description of the type and method of coal mining procedures and proposed engineering techniques' anticipated annual and total production of coal, by tonnage, the major equipment used or proposed to be used for all aspects of the operation, within the proposed mine plan area;

(b) A detailed timetable for the completion of each major step in the reclamation plan;

(c) A detailed estimate of the costs of reclamation of the proposed operations required to be covered by a performance bond under Subchapter J of this Chapter, with supporting calculations for the estimates;

(d) A plan for backfilling, soil stabilization, compacting, and grading and cross-sections that show the anticipated soil surface configuration of the permit area, in accordance with Sections 817.101 through 817.106;

(e) A plan for topsoil handling and replacement and revegetation of the areas affected by surface operations or facilities according to 30 CFR 817.21-817.25 and 817.111-817.116 including, but not limited to, a description of—

(1) Timing of revegetation steps;

(2) Species of plants and trees to be used;

(3) Methods and amounts of seed or numbers of seedlings to be planted per acre;

(4) Mulching techniques;

(5) Irrigation, if appropriate, and pest and disease control measures, if any;

(6) Measures proposed for comparison of revegetation of the permit area with the reference area; and,

(7) A soil testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation.

(f) A description of the measures selected for conducting the mining operation so that maximum use and conservation of the coal resource is ensured to minimize the need to re-mine the land in the future;

(g) A description of measures to be employed to insure that all debris, acid-forming and toxic-forming or materials constituting a fire hazard are disposed of in accordance with 30 CFR 817.103;

(h) A description, including appropriate cross-sections and maps, of the measures to be used to seal mine openings and to plug, case or manage drill and other bore holes within the proposed mine plan area in accordance with 30 CFR 817.13-817.15;

(i) A description of how mining and other equipment and facilities will be removed from the mine plan area when no longer needed, in accordance with 30 CFR 817.11-817.132; and

(j) A description of steps to be taken to comply with the requirements of the Clean Air Act (42 U.S.C. section 7401 et. seq), the Clean Water Act (33 U.S.C. Sections 1251 et. seq), and other applicable air and water quality laws and regulations and any applicable health and safety standards;

§ 784.13 Protection of hydrologic balance.

(a) Each application shall contain a detailed description, with appropriate maps and cross-section drawings, of the measures to be taken during and after the mining and reclamation process, in accordance with 30 CFR 817, to ensure the protection of—

(1) The quality of surface and ground water systems, both within the mine plan area and adjacent area, from the adverse effects of the surface coal mining and reclamation operation;

(2) The rights of present users to surface and ground water;

(3) The quantity of surface and ground water both within the mine plan area and adjacent area from the adverse effects of the surface coal mining and reclamation operation, and to provide alternative sources of water where the protection of quantity cannot be ensured; and

(4) Water quality by locating openings for all new drift mines working acid-producing or iron-producing coal scans in such a manner as to prevent a gravity discharge of water from the mine.

(b) The description shall include the following:

(1) A plan for the control of surface and ground water drainage into, through and out of the area to be affected by the mining operation;

(2) A plan for the treatment, where required under Subchapter K and the

regulatory program, of surface or ground water drainage from the mine plan area, and proposed quantitative limits on pollutants in discharges of the drainage according to the more stringent of the following:

(i) Subchapter K and the regulatory program, or;

(ii) Other applicable State and Federal laws;

(3) A plan for the restoration of the water recharge capacity of the mine plan area to its approximate premining condition; and

(4) A plan for the collection, recording, and reporting of ground and surface water quality and quantity data according to the performance standards of Subchapter K and the regulatory program and providing for—

(i) Adequate monitoring of all discharge from the affected area;

(ii) Adequate data to describe the likely daily and seasonal variations in discharges from the mine plan areas, in terms of water flow, pH, total iron, total manganese, and total suspended solids and, if requested by the regulatory authority, any other parameter characteristic of the discharge;

(iii) Monitoring at appropriate frequencies to measure variations in concentration;

(iv) An analytical quality control system, including standard methods of analysis such as those specified in 40 CFR 136; and

(v) A regular report of all measurements to the regulatory authority within 60 days of sample collection, unless violations of permit conditions occur in which case the regulatory authority shall be notified immediately after receipt of analytical results by the permittee. If the discharge is subject to regulation by a Federal or State permit issued in compliance with the Clean Water Act (33 USC Sections 1251-1378), a copy of the completed reporting form supplied to meet the regulatory authority to satisfy the reporting requirements if the data meets the sampling frequency and other requirements of this paragraph.

(c) The description shall include a statement of the—

(1) Probable hydrologic consequences of the proposed mining and reclamation operations, both off and on the mine plan area with respect to the hydrologic regime, quantity and quality of water in surface and ground water systems under all seasonal conditions, including the contents of dissolved and total suspended solids, total iron, pH, total manganese, and other information required by the regulatory authority; and

(2) Probable cumulative impacts of all anticipated mining in the general area around the proposed mine plan area upon the hydrology of the area and particularly upon water availability.

(d) Information required under paragraph (c) of this Section, shall be provided by the regulatory authority, to the extent that this data is available from a Federal or State agency. If this information is not available from a Federal or State agency, the applicant shall submit this information to the regulatory authority as part of the permit application. The permit shall not be approved by the regulatory authority until this information is in the application.

(e) Each plan shall contain a detailed description, with appropriate drawings, of permanent entry seals and down-slope barriers designed to insure stability under anticipated hydraulic heads developed while promoting mine inundation after mine closure for the mine plan area.

§ 784.14 Reclamation and operations plan: Post-mining land uses.

(a) Each plan shall contain a detailed description of the proposed use of land areas affected by surface operations or facilities following reclamation, including a discussion of the capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land use policies and plans.

(b) The description of the proposed post-mining land use shall set forth the following:

(1) How the proposed post-mining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use;

(2) Where range or grazing is the proposed post-mining use, the detailed management plans to be implemented;

(3) Where a land-use different from the pre-mining land use is proposed, all materials needed for approval of the alternative use under 30 CFR 817.133; and

(4) The consideration given to making the proposed surface coal mining and reclamation operation consistent with surface owner plans, and applicable State and local land use plans and programs.

(c) The description shall be accompanied by a copy of the comments concerning the proposed use from the legal or equitable owner of record of the surface of the permit area and the State and local government agencies which would have to initiate, implement, approve or authorize the proposed use of the land following reclamation.

§ 784.15 Reclamation and operations plan: Ponds, impoundments, banks, and embankments.

(a) *General.* Each plan shall contain a description, map and cross-section drawing, of each temporary and permanent sedimentation pond, permanent water impoundment, coal processing waste bank and coal processing waste dam and embankment which shall comply with 30 CFR 817.46, 817.49, 817.56, 817.81-817.85 and 817.91-817.93. Each plan shall cover geotechnical investigation, design, construction, operation, maintenance and removal, if appropriate. Each plan shall at a minimum, comply with the requirements of the Mine Health and Safety Administration, 30 CFR 77.216.2 for designing any sedimentation pond or coal processing waste dam or impoundment. Each permanent water impoundment to remain on the mine plan area after mining shall comply with the design criteria of Pub. L. 83-566 (16 USC Section 1006).

(b) Each sedimentation pond, shall be designed according to the performance standards in 30 CFR 817.48. Any sedimentation pond or earthern structure which remains on the mine plan area as a permanent water impoundment shall meet the standards in 30 CFR 817.49 and shall be designed according to the criteria of Pub.L. 83-566 (16 USC Section 1006).

(c) Coal processing waste banks Coal processing waste banks shall be designed to comply with the requirements of 30 CFR 817.81-.85 and shall be approved by a registered professional engineer.

(d) Coal processing waste dams and embankments Coal processing waste dams and embankments shall be designed to comply with the criteria in 30 CFR 817.91-.93. The plan shall include the results of a geotechnical investigation of the proposed dam or embankment foundation area to determine the structural competence of the bedrock foundation material to support the proposed dam or embankment structure and the impounded material. The geotechnical investigation shall be planned and supervised by an engineer or engineering geologist, according to the following:

(1) The number, location and depth of borings or test pits shall be determined with respect to the size of the dam or embankment, and subsurface conditions.

(2) The character of bedrock and proposed abutment sites and any adverse geologic conditions shall be considered as to the particular dam or embankment site and reservoir site.

(3) Each plan shall identify all springs, seepage, and ground water flow observed or anticipated during wet periods in an area of the proposed dam or embankment.

(4) Each applicant shall consider the possibility of mud flows, rock debris falls or other landslide conditions into the dam or embankment or into the impounding material.

(5) A survey shall be made regarding the potential effects of subsidence of the geological subsurface strata due to past and future mining operations.

(e) Each plan under paragraphs (b) and (d) of this section shall include a stability analysis of each structure if the structure is at least 20 feet high and impounds more than 200 acre-feet. The stability analysis shall include, but not be limited to strength parameters, pore pressures, and long term seepage conditions. The plan shall also contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods.

§ 784.16 Protection of public parks and historic places.

For any public parks or historic places that may be adversely affected by the proposed operation, each plan shall describe the measures to be used to minimize or prevent these impacts, to obtain approval of the regulatory authority and other agencies under 30 CFR 761.12(f).

§ 784.17 Relocation or use of public roads.

Each plan shall describe the measures to be used by the applicant to ensure that the interests of the public and land owners affected are protected, if, under 30 CFR 761.12(d), the applicant seeks to have the regulatory authority's approval of—

(a) Conducting the proposed operations within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join such right-of-way; or

(b) Relocating the public road.

§ 784.18 Underground development waste.

(a) Each plan shall contain a description, including a map and cross-section plan of the proposed disposal method and site for placing underground development waste and spoil generated at surface areas affected by surface operations and facilities. Each plan shall cover the geotechnical investigations, design, construction, operation, maintenance and removal, if appropriate, in compliance with 30 CFR 817.121 through 817.126

§ 784.19 Subsidence control plan.

Each plan shall describe the subsidence control to be used to achieve compliance with requirements of Sections 817.121 through 817.126 of Subchapter K, and shall be prepared in accordance with the following:

(a) The subsidence control plan shall be designed using recognized professional standards, certified by a qualified registered professional mining engineer or engineering geologist, and approved by the regulatory authority.

(b) It shall explain how the operations shall be conducted to prevent material damage to the surface to the extent technologically and economically feasible and maintain the value and use of surface lands within the area of influence. The area of influence is the area above and adjacent to the area to be mined as defined by an angle of draw prescribed by the regulatory authority.

(c) The subsidence control plan shall set forth, but not be limited to, the following considerations:

(1) Geologic description of mine plan area required under 30 CFR 784.14;

(2) Maps and plans required under 30 CFR 784.22;

(3) Geometry, layout and progression of mine plan workings;

(4) Number of seams to be mined, and percent recovery after final mine pass;

(5) Proposed method and degree of back filling planned;

(6) Bearing strength and location of remnant coal pillars and barriers;

(7) Types and placement of artificial support; and

(8) A description of the mining technology to be employed.

(d) Each plan shall contain a proposed subsidence monitoring plan, describing the existing surface areas for which a subsidence control plan is required under this Section, and the methods that will be used to evaluate subsidence during and after the proposed underground mining operation. This plan shall be prepared according to the following:

(1) Measurements shall accurately delineate vertical and horizontal movements due to mine subsidence;

(i) Surveying shall be over lines of monuments installed as directed by the regulatory authority;

(ii) Each monument shall be constructed so that it is not affected by temperature variations, moisture, frost heave, soil creep, or disturbance by animals or people;

(iii) Spacing of monuments shall be such as to adequately provide information on horizontal and vertical movements as directed by the regulatory authority; and

(iv) Surveys shall begin and end at reference benchmarks in stable areas not subject to mine subsidence or other local instability.

(2) Surveying shall be performed by a professional engineer or qualified surveyor using generally accepted surveying methods.

(3) Surveys shall be at time intervals specified by the regulatory authority, but not less than semi-annually in areas of active mining. Upon completion of underground mining resurveying shall be at intervals specified by the regulatory authority and shall be continued at least as long as the life of any guarantee against damage, or until the area has subsided and stabilized.

(4) A survey to document pre-mining conditions shall be made prior to any new underground mining operations.

(5) A visual survey shall be made at least annually to identify and document the presence of tension cracks, fissures, structural offsets, and obvious subsidence damage to buildings, roads, railroads, dams, or other cultural features.

(6) If the person who conducts the underground mining activity is denied reasonable access for surveying by the surface owner of lands subject to subsidence, the regulatory authority may modify the requirements of this section as appropriate.

§ 784.20 Protection of fish and wildlife.

Each application shall contain a fish and wildlife plan, for surface areas to be affected within the mine plan area and adjacent areas, which provides:

(a) A statement of how the applicant proposes to use the best technology currently available for the site so that affected areas are reclaimed to a condition which will enhance fish, wildlife, and related environmental values.

(b) If the applicant determines that it will not be practicable to achieve a condition which clearly shows a trend toward enhancement of fish and wildlife resources at the time revegetation has been successfully completed under 30 CFR 817.111–817.117, the applicant shall state—

(1) Why it is not practicable to achieve such a condition; and

(2) How the condition which is achieved uses best technology currently available to minimize adverse impacts on fish, wildlife, and related environmental values.

(c) (1) Statements from applicable State and Federal fish and wildlife agencies on which impact control measures, management techniques and monitoring methods are recommended for the site.

(2) If a State or Federal fish and wildlife management agency fails to respond to the applicant's written request for this statement within six weeks, the applicant need not include the statement as part of the application.

(d) A statement explaining how the applicant will utilize impact control measures, management techniques and monitoring methods to protect or enhance the following, if they are affected by the operation:

(1) Critical habitats of threatened or endangered species of plants or animals listed by the Secretary;

(2) Other species such as eagles, migratory birds or game animals, protected by State or Federal law, and their habitats;

(3) Habitat types of unique value for fish and wildlife, such as wetlands, riparian areas, cliffs supporting raptors, areas offering unique shelter or protection, reproduction and nursery areas, and wintering areas.

§ 784.21 Diversions.

Each application shall contain descriptions, including maps and cross-section, of stream channel diversions and other diversions constructed to control overland flow around or through the mine plan area in compliance with the performance standards of 30 CFR 817.43-817.44.

§ 784.22 Maps and plans.

Each map, plan and cross-section shall delineate the location in the permit area where the performance standards in of Part 817 of Subchapter K apply. Areas that were mined under the initial regulatory program or that were mined before February 3, 1978 shall also be delineated on the map.

(a) Maps and plans shall have a scale of 1:25,000 or larger. Cross-sections shall have a scale prescribed by the regulatory authority. The maps, plans and cross-sections shall show the mining operations to be conducted and the lands to be affected throughout the operation.

(b) Any change in a facility or feature caused by the proposed mining operations shall be described if the facility or feature was shown on the map and plan required by 30 CFR 783.24-783.25.

(c) The following features shall be shown in the maps, plans and cross-sections:

(1) Each building, and utility corridor and facility to be used within the mine plan area;

(2) The area of land to be affected within the mine plan area, according to the sequence of mining and reclamation;

(3) Each coal storage, cleaning and loading area;

(4) Each topsoil, overburden, refuse, spoil and waste storage area;

(5) Each water diversion, collection, conveyance, treatment, storage and discharge facility to be used;

(6) Each source of and facility relating to coal processing and pollution control waste disposal;

(7) Each facility to be used to protect and enhance fish and wildlife and related environmental values;

(8) Each explosive storage and handling facility;

(9) Location, design and construction specifications for each sedimentation pond, permanent water impoundment, coal processing waste bank and coal processing waste dam and embankment according to 30 CFR 784.15 and disposal of underground development waste and excess spoil according to 30 CFR 784.18.

(10) Each profile, at cross-sections specified by the regulatory authority, of the anticipated final surface configuration to be achieved for the affected areas;

(11) Location of water quality, fish and wildlife, and each subsidence monitoring point;

(12) Location and specifications for each facility that will remain on the mine plan area as a permanent feature, after the completion of surface coal mining and reclamation operations.

§ 784.23 Transportation facilities.

Each plan shall contain a description of each road, conveyor and rail system to be constructed, used or maintained within the mine plan area. The description shall include a map and an appropriate cross-section plan and shall include the following:

(a) Specifications for each road width, road gradient, road surface, road cut, fill embankment, culvert, bridge, drainage ditch, and drainage structure.

(b) A report of appropriate geotechnical analysis where approval of the regulatory authority is required for steep cut slopes under 30 CFR 817.32 (b)(2).

(c) A description of each measure to be taken for alteration or relocation of a natural drainway as required to obtain approval of the regulatory authority under 30 CFR 817.32(b)(4).

(d) Each application shall describe material, other than a rock headwall, to be used for protection of the inlet end of a ditch relief culvert as required to obtain approval of the regulatory authority under 30 CFR 817.32(c)(3).

(e) Each application shall describe each measure to be taken for construction of a road embankment over 15 feet in height over a stream as required to obtain approval under 30 CFR 817.32(d).

§ 784.25 Return of coal processing waste to abandoned underground workings.

(a) Each plan shall describe the design, operation and maintenance of the proposed coal processing waste disposal facility, including flow diagrams and any other necessary drawings and maps, for the approval of the regulatory authority under 30 CFR 817.88.

(b) Each plan shall describe the source and quality of waste to be stowed, area to be backfilled, percent of the mine void to be filled, method of constructing underground retaining walls, influence of the backfilling operation on active underground mine operation, surface area to be supported by the backfill and the anticipated occurrence of surface effects following backfilling.

(c) The applicant shall describe the source of the hydraulic transport mediums, method of dewatering the placed backfill, retainment of water underground, treatment of water if released to surface streams, and the effect on the hydrologic regime.

(d) The plan shall describe each of permanent monitoring well to be located in the backfilled area, the strata underlying the mined coal, and gradient from the backfilled area.

(e) The requirements of paragraphs (a), (b), (c), and (d) of this Section shall also apply to pneumatic backfilling operations, except where the requirements specifying hydrologic monitoring is exempted by the regulatory authority.

PART 785—REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES OF MINING

Sec.

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AUTHORITY: Secs. 102, 201, 501(b), 503, 504, 506, 507, 508, 509, 510, 511, 513, 514, 515, 516, 517, 519, 527, 529, 701, and 711, Pub. L. 95-87, 91 Stat. 445 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1256, 1257, 1258, 1259, 1260, 1261, 1263, 1264, 1265, 1266, 1267, 1269, 1277, 1279, 1291, 1301).

§ 785.1 Scope.

(a) This Part establishes the minimum requirements for permits for special categories of surface coal mining and reclamation operations. These requirements are in addition to the general permit requirements contained in this Subchapter G.

§ 785.2 Objective.

The objective of this Part is to ensure that permits are issued to categories of surface coal mining and reclamation operations only after the regulatory authority receives information

that shows that the operation will be conducted according to the environmental performance standards of the Act.

§ 785.11 Anthracite surface coal mining and reclamation operations.

(a) This Section applies to any person who conducts or intends to conduct anthracite surface coal mining and reclamation operations in Pennsylvania.

(b) Each person who intends to conduct anthracite surface coal mining and reclamation operations shall apply for and obtain a permit in accordance with the requirements of this Subchapter. The following standards apply to applications for and issuance of permits:

(1) The environmental protection performance standards of 30 CFR 820.

(2) All of the provisions of Subchapter J except the specified bond limits and the period of revegetation responsibility.

(c) If the Pennsylvania anthracite permanent regulatory program is amended with respect to environmental protection performance standards, specified bond limits, or period of revegetation responsibility, the Secretary shall issue regulations necessary to meet the purposes of the Act. Each person who conducts or intends to conduct anthracite surface coal mining and reclamation operations shall comply with the additional regulations.

§ 785.12 Special bituminous surface coal mining and reclamation operations.

(a) This section applies to any person who conducts or intends to conduct special bituminous coal mining and reclamation operations in Wyoming.

(b) Each application for a permit for a special bituminous coal mine operation shall include, as part of the mining operations and reclamation plan, the detailed descriptions, maps and plans needed to demonstrate that the operations will comply with the requirements of the Act and 30 CFR 825.

(c) The regulatory authority may issue a permit for a special bituminous coal mine operation for which a complete application has been filed in accordance with this section, if it finds, in writing, that the operation will be conducted in compliance with the Act and 30 CFR 825.

(d) Upon amendment or revision to the Wyoming regulatory program, regulations, or decisions made thereunder, governing special bituminous coal mines, the Secretary shall issue additional regulations necessary to meet the purposes of the Act.

§ 785.13 Experimental practices mining.

(a) This section applies to any person who conducts or intends to conduct surface coal mining and reclamation operations under a permit authorizing the use of experimental practices on an expermental basis, from the environmental protection performance standards of Subchapter K and a regulatory program.

(b) The purpose of this Section is to provide permit requirements for the permitting of surface coal mining and reclamation operations that encourage advances in mining and reclamation practices or allow post-mining land use for industrial, commercial, residential or public use (including recreational facilities) on an experimental basis.

(c) Experimental practice, as used in this Section, means the use of alternative surface coal mining and reclamation operational practices on an experimental basis. Experimental practices need not comply with the environmental protection performance standards of Subchapter K or a regulatory program if permitted by this Section.

(d) No person shall engage in or maintain any experimental practice, unless the experimental practice is first approved in a permit by the regulatory authority and the Director.

(e) Each person who desires to conduct an experimental practice shall submit a permit application for the approval of the regulatory authority and the Director. The permit application shall contain appropriate descriptions, maps and plans which show—

(1) The nature of the experimental practice requested.

(2) How use of the experimental practice—

(i) Encourages advances in mining and reclamation technology, or

(ii) Allows a post-mining land use for industrial, commercial, residential, or public use (including recreational facilities) on an experimental basis when the results are not otherwise attainable under the approved regulatory program.

(3) That the mining and reclamation operations proposed for use of experimental practices are not larger or more numerous than necessary to determine the effectiveness and economic feasibility of the experimental practices.

(4) That the experimental practice—

(i) Is potentially more, or at least as, environmentally protective during and after the mining and reclamation operations, as those required under Subchapter K and the regulatory program; and

(ii) Will not reduce the protection afforded public health and safety below that provided by the requirements of Subchapter K and the regulatory program.

(5) That the applicant will conduct special monitoring with respect to the experimental practice during and after the operations involved. The monitoring program shall—

(i) Insure the collection and analysis of sufficient and reliable data to enable the regulatory authority and the Director to make adequate comparisons with other surface coal mining and reclamation operations employing similar experimental practices; and

(ii) Include requirements designed to identify, as soon as possible, potential risks to the environment and public health and safety from the use of the experimental practices.

(f) Each application shall contain provisions that invoke the environmental protection performance standards of Subchapter K in the event the objective of the experimental practice is a failure.

(g) All experimental practices sought shall be specifically identified in the newspaper advertisements by the applicant and the written notifications by the regulatory authority required under 30 CFR 787.11.

(h) No permit authorizing an experimental practice shall be issued, unless the regulatory authority first finds, in writing, upon the basis of both a complete application filed in accordance with the requirements of this section and the comments of the Director that—

(1) The experimental practice meets all of the requirements of paragraphs (e)(2) through (e)(5) of this section;

(2) The experimental practice is based on a clearly defined set of objectives which can reasonably be expected to be achieved;

(3) The experimental practice has been specifically approved, in writing, by the Director, based on his findings that all of the requirements of paragraphs (e)(1) through (e)(5) of this section will be met; and

(4) The permit contains conditions which specifically—

(i) Limit the experimental practice authorized to that granted by the regulatory authority and the Director;

(ii) Impose enforceable alternative environmental protection requirements; and

(iii) Require the person to conduct the periodic monitoring, recording and reporting program set forth in the application, with such additional requirements as the regulatory authority or the Director may require.

(i) Each permit which authorizes the use of an experimental practice shall be reviewed at least every 3 years by the regulatory authority, or at least once prior to the middle of the stated permit term. After review, the regulatory authority shall require by order, supported by written findings, any

reasonable revision or modification of the permit provisions necessary to ensure that the operations involved are conducted to fully protect the environment and public health and safety. Any person who is or may be adversely affected by the order shall be provided with an opportunity for a hearing as established in the regulatory program.

§ 785.14 Steep slope mining.

(a) This section applies to any persons who conducts or intends to conduct steep slope surface coal mining and reclamation operations, except—

(1) Where an operator proposes to conduct surface coal mining and reclamation operations on flat or gently rolling terrain, leaving a plain or predominantly flat area, but on which an occasional steep slope is encountered as the mining operation proceeds;

(2) Where a person obtains a permit under the provisions of Section 785.15; or

(3) To the extent that a person obtains a permit incorporating a variance under Section 785.16.

(b) Steep slope, as used in this Section shall have the same meaning as in Section 826.5 of Subchapter K.

(c) Any application for a permit for surface coal mining and reclamation operations covered by this Section shall contain, in addition to all information required under the other provisions of this Subchapter, sufficient information to establish that the operations will be conducted in accordance with the requirements of 30 CFR 826.12.

(d) No permit shall be issued for any operations covered by this section, unless the regulatory authority finds, in writing, that in addition to meeting all other requirements of this Subchapter, the operation will be conducted in accordance with the requirements of 30 CFR 826.12.

§ 785.15 Mountaintop removal mining.

(a) This section applies to any person who conducts or intends to conduct mountaintop removal mining.

(b) Mountaintop removal mining means surface mining activities, where the mining operation removes an entire coal seam or seams running through the upper fraction of a mountain, ridge, or hill, except as provided for in Section 824.11(b)(1) of Subchapter K of this Chapter, by removing substantially all of the overburden off the bench and creating a level plateau or a gently rolling contour, with no high walls remaining, and capable of supporting post-mining land-uses in accordance with the requirements of this Section.

(c) The regulatory authority may issue a permit for mountaintop removal mining, without regard to the requirements of 30 CFR 816.101-816.105 to restore the land disturbed by such mining to their approximate original contour, if it first finds, in writing, on the basis of a complete application, that the following requirements are met:

(1) The proposed post-mining land use of the lands to be affected will be an industrial, commercial, agricultural, residential, or public facility (including recreational facilities) and if—

(i) After consultation with the appropriate land-use planning agencies, if any, the proposed land use is deemed by the regulatory authority to constitute an equal or better economic or public use of the affected land compared with the pre-mining use;

(ii) The applicant demonstrates compliance with the requirements for acceptable alternative post-mining land uses of 30 CFR 816.124;

(iii) The proposed use would be compatible with adjacent land uses and existing State and local land use plans and programs; and

(iv) The regulatory authority has provided, in writing, an opportunity of not more than 60 days to review and comment on such proposed use to the governing body of general purpose government in whose jurisdiction the land is located and any State or Federal agency which the regulatory authority, in its discretion, determines to have in interest in the proposed use.

(2) The applicant has demonstrated that in place of restoration of the land to be affected to the approximate original contour under 30 CFR 816.101-816.105, the operation will be conducted in compliance with the requirements of 30 CFR 824.

(3) The requirements of 30 CFR 824 are made a specific condition of the permit.

(4) All other requirements of the Act, this Chapter, and the regulatory program are met by the proposed operations.

(5) The permit is clearly identified for mountaintop removal mining.

(d) (1) All permits granting approval of the regulatory authority for mountaintop removal mining shall be reviewed and modified not more than 3 years from the date of issuance and each renewal thereof, unless the permittee demonstrates and the regulatory authority finds, in writing, that all operations under the permit are proceeding and will continue to be conducted in accordance with the terms of the permit and requirements of the Act, this Chapter, and the regulatory program.

(2) The terms and conditions of a permit for mountaintop removal mining may be modified at any time by the regulatory authority, if it determines that more stringent measures are necessary to insure that the operation is conducted in compliance with the requirements of the Act, this Chapter, and the regulatory program.

(e) The regulatory authority shall promulgate specific regulations to govern the granting of permits in accordance with the provisions of this Section, and may impose any necessary additional requirements.

§ 785.16 Permits incorporating variances from approximate original contour restoration requirements.

(a) This section applies to non-mountaintop removal, steepslope surface coal mining and reclamation operations under a regulatory program where the operation is not to be reclaimed to achieve the approximate original contour required by 30 CFR 826.12(b).

(b) Steep slope as used in this section, shall have the same meaning as in 30 CFR 826.5.

(c) The objective of this section is to allow for steep slope surface coal mining and reclamation operations that—

(1) Improve watershed control of lands within the permit area and on adjacent lands; and

(2) Make land within the permit area, after reclamation, suitable for an industrial, commercial, or public use, including recreational facilities.

(d) The regulatory authority may issue a permit for surface coal mining and reclamation operations incorporating a variance from the requirement for restoration of affected lands to their approximate original contour. The regulatory may issue the permit only if it first finds, in writing, on the basis of a complete application, that the following requirements are met:

(1) The applicant demonstrates that the purpose of the variance is to make the lands to be affected within the permit area suitable for an industrial, commercial, residential, or public, including recreational facilities, post-mining land use if—

(i) The proposed use, after consultation with the appropriate land-use planning agencies, if any, constitutes an equal or better economic or public use; and

(ii) The applicant demonstrates compliance with the requirements for acceptable alternative post-mining land uses of 30 CFR 816.124.

(2) The applicant demonstrates that the watershed of lands within the permit area and adjacent areas will be improved by the operations, through—

(i) A reduction in the amount of total suspended solids or other pollutants discharged to ground or surface waters from the permit area as compared to such discharges prior to mining, so as to improve public or private uses or the ecology of such waters; or

(ii) Reduced flood hazards within the watershed containing the permit area by reduction of the peak flow discharges from precipitation events or thaws; and

(iii) The appropriate State environmental agency approves the plan.

(3) The applicant shall demonstrate that the owner of the surface of the lands within the permit area has knowingly requested, in writing, as part of the application, that a variance be granted. The request shall be made separately from any surface owner consent given for the operations involved under Section 778.15 and show an understanding that the variance could not be granted without the surface owner's request.

(4) The applicant shall demonstrate that the proposed operations will be conducted in compliance with the requirements of Section 826.13 of Part 826 of Subchapter K.

(5) The requirements of Section 826.13 are made a specific condition of the permit.

(6) The permit is specifically marked as containing a variance from approximate original contour.

(7) All other requirements of the Act, this Chapter, and the regulatory program are to be met by the proposed operations.

(e) (1) Any permits incorporating a variance issued under this section shall be reviewed and modified by the regulatory authority—

(i) Not later than 3 years from the date of its issuance;

(ii) Before each permit renewal;

(iii) Not later than the middle of each permit term.

(2) If the permittee demonstrates to the regulatory authority that the operations involved have been and continue to be conducted in compliance with the terms and conditions of the permit and the requirements of the Act, this Chapter and the regulatory program the review need not be held.

(f) The terms and conditions of a permit incorporating a variance under this section may be modified at any time by the regulatory authority, if it determines that more stringent measures are necessary to insure that the operations involved are conducted in compliance with the requirements of this Act, this Chapter and the regulatory program.

(g) The regulatory authority shall promulgate specific regulations to govern the granting of variances in accordance with the provisions of this Section and may impose additional requirements as it deems to be necessary.

§ 785.17 Prime farmlands.

(a) *Scope.*

This Section applies to any person who conducts or intends to conduct surface coal mining and reclamation operations on prime farmlands, except for areas that were under a coal mining permit approved prior to August 3, 1977.

(b) *Definition.* Soil survey means a field and other investigation, resulting in a map showing the geographic distribution of different kinds of soils and an accompanying report that describes, classifies, and interprets for use such soils. The survey must meet the National Cooperative Soil Survey standards and be conducted according to the procedures set forth in U.S. Department of Agriculture Handbooks 436 (Soil Taxonomy) and 18 (Soil Survey Manual).

(c) *Pre-application investigation of prime farmland.*

(1) Land shall not be considered prime farmland where the applicant can demonstrate one or more of the following situations:

(i) The land has not been historically used for the production of cultivated crops;

(ii) The slope of the land is 10 percent or greater;

(iii) The land is not irrigated or naturally subirrigated, has no developed water supply that is dependable and of adequate quality, and the average annual precipitation is 14 inches or less;

(iv) Other factors exist, such as a very rocky surface, or the land is frequently flooded; or

(v) On the basis of a soil survey of lands within the permit area, there are no soil map units that have been designated prime farmland by the U.S. Soil Conservation Service.

(2) If the pre-application investigation establishes that the lands within the proposed permit area are not prime farmland, the applicant shall submit with the permit application a request for negative determination, in accordance with paragraph (1) of this section.

(d) *Identification of prime farmland.*

(1) If the results of the pre-application investigation suggest that lands within the proposed permit area may be prime farmlands, the applicant shall contact the U.S. Soil Conservation Service, to determine if such lands have a soil survey and whether the applicable soil mapping units have been designated as prime farmlands. If no such soil survey has been made for the lands within the proposed permit area, the applicant shall cause such a survey to be made.

(2) When a soil survey of lands within the proposed permit area contains soil mapping units which have been designated as prime farmlands, the applicant shall submit a permit application, in accordance with paragraph (e) of this section for such designated land.

(3) When a soil survey for lands within the proposed permit area contains soil mapping units which have not been designated, after review by the U.S. Soil Conservation Service, as prime farmland, the applicant shall submit a request for negative determination for non-designated land with the permit application in accordance with paragraph (c) of this section.

(e) *Application contents for prime farmland.*

If land within the proposed permit area is identified as prime farmland under paragraph (d) of this section, the applicant shall submit a plan for the mining and restoration of the land. The plan shall be reviewed by the U.S. Soil Conservation Service and used by the regulatory authority, with other relevant information, to judge the technological capability of the applicant to restore prime farmlands in accordance with Part 823 of Subchapter K. Each plan shall contain, at a minimum—

(1) A mapping unit description of each soil, according to the standards of the National Cooperative Soil Survey and in accordance with the procedures set forth in U.S. Department of Agriculture Handbooks 436 (Soil Taxonomy) and 18 (Soil Survey Manual). The description shall include a representative soil profile description from within the permit area and show the depth and thickness of each of the soil horizons that—

(i) Collectively constitute the root zone of the locally adapted cultivated crops; and

(ii) Are to be removed, stored and replaced.

(2) The proposed method and type of equipment to be used for removal, storage, and replacement of the soil in accordance with 30 CFR 823.

(3) The location of areas to be used for the separate stockpiling of the soil and plans for soil stabilization before redistribution.

(4) If applicable, documentation, such as agricultural school studies or other scientific data from comparable areas, that supports the use of other suitable material, instead of the A, B, or C soil horizon, to obtain on the restored area equivalent or higher levels of yield as non-mined prime farmlands in the surrounding area under equivalent levels of management.

(5) Plans for seeding or cropping the final graded disturbed land and the conservation practices to be used to adequately control erosion and sedimentation and restoration of an adequate soil moisture regime, during the period from completion of regrading until release of the performance bond or equivalent guarantee under Subchapter J. Proper adjustments for seasons must be proposed so that final graded land is not exposed to erosion

during seasons when vegetation or conservation practices cannot be established due to weather conditions.

(6) Available agricultural school studies, company data, or other scientific data for comparable areas that demonstrate that the proposed method of reclamation achieves, within a reasonable time, equivalent or higher levels of yield after mining as existed before mining.

(f) *Consultation with Secretary of Agriculture and Issuance of Permit.*

(1) Before any permit is issued for areas that include prime farmlands, the regulatory authority shall consult with the Secretary of Agriculture. The Secretary of Agriculture provides for review and comment of the proposed method of soil reconstruction in the plan submitted under paragraph (e) of this Section and, if inadequate, shall suggest revisions that will result in a more complete and adequate restoration. The Secretary of Agriculture has assigned his responsibilities under this Section to the Administrator of the U.S. Soil Conservation Service. The Soil Conservation Service shall carry out consultation and review through the State Conservationist located in each State.

(2) A permit for the mining and reclamation of prime farmland may be granted by the regulatory authority, if it first finds, in writing, upon the basis of a complete application, that—

(i) The proposed post-mining land use is prime farmland;

(ii) The permit incorporates as specific conditions the contents of the plan submitted under paragraph (e) of this section, which considers any revisions suggested by the Secretary of Agriculture;

(iii) The applicant has the technological capability to restore the prime farmland, within a reasonable time, to equivalent or higher levels of yield as non-mined prime farmland in the surrounding area under equivalent levels of management; and

(iv) The proposed operations shall be conducted in compliance with the requirements of 30 CFR 823 of and other environmental protection performance standards for prime farmland of the regulatory program.

785.18 Variances for delay in contemporaneous reclamation requirement in combined surface and underground mining operations.

(a) *Scope.* This Section applies to any person who conducts or intends to conduct combined surface coal mining activities and underground coal mining operations where contemporaneous reclamation as required by Section 515(b)(16) is not practicable and a delay is requested to allow underground mining before the reclamation operation for the surface mining activities is completed.

(b) The objective of this Section is to allow for delay in the reclamation activity if it allows the underground mining operations to be conducted to ensure both the maximum practical recovery of coal resources and to avoid multiple disturbances of surface lands or waters.

(c) Any person who conducts surface coal mining and reclamation operations shall comply with the contemporaneous reclamation requirements of Section 515(b)(16) of the Act, these regulations, and the State program unless a variance from those requirements is granted in the permit issued to that person by the regulatory authority.

(d) *Application contents for variances.*

Any person who desires to obtain a variance under this section shall file with the regulatory authority complete applications for both the surface coal mining activities and underground mining activities which are to be combined. The mining and reclamation operation plans for these permits shall contain appropriate narratives, maps and plans, which—

(1) Show why the proposed underground mining operations are necessary or desirable to assure maximum practical recovery of coal;

(2) Show how multiple disturbances of surface lands or waters will be avoided;

(3) Identify the specific surface areas for which a variance is sought and the particular sections of the Act, these regulations, or the State program from which a variance is being sought;

(4) Show how the operation will comply with 30 CFR 818 and with the other applicable requirements of the regulatory program;

(5) Show why the variance sought is necessary for the implementation of the proposed underground mining operations;

(6) Provide an assessment of the adverse environmental damages, if any, that will result if the reclamation proceeded in accordance with Section 515(b)(16) of the Act, these regulations, and the regulatory program; and

(7) Show how off-site storage of spoil will be conducted to comply with the requirements of the Act, 30 CFR 818, and the regulatory program.

(e) *Issuance of permit.*

A permit incorporating a variance under this section may be issued by the regulatory authority, if it first finds, in writing, upon the basis of a complete application filed in accordance with this Section, that—

(1) The applicant has presented, as part of the permit application, specific, feasible plans for the proposed underground mining operations;

(2) The proposed underground mining activities are necessary or desirable to assure maximum practical recovery of the mineral resource and will avoid multiple disturbance of surface land or waters;

(3) The applicant has satisfactorily demonstrated that the applications for the surface mining activities and underground mining operations conform to the requirements of the regulatory program and that all other permits necessary for the underground mining activities have been issued by the appropriate authority;

(4) The surface area of surface coal mining activities proposed for the variance have been shown by the applicant to be necessary for implementing the proposed underground mining activities;

(5) No substantial adverse environmental damage, either on-site or off-site, will result from the delay in completion of reclamation, as practicable, otherwise required by Section 515(b)(16) of the Act, 30 CFR 816.100–816.123 and the regulatory program.

(6) The operations will, insofar as a variance is authorized, be conducted in compliance with the requirements of Part 818 of Subchapter K and the regulatory program;

(7) Provisions for off-site storage of spoil will comply with the requirements of Part 818 of Subchapter K and the regulatory program;

(8) The liability under the bond filed by the applicant with the regulatory authority pursuant to Subchapter J of this Chapter and the regulatory program shall be for the duration of the underground mining activities and until all requirements of Subchapter J and the regulatory program have been complied with; and

(9) The permit for the surface mining activities contains specific conditions—

(i) Delineating the particular surface areas for which a variance is authorized;

(ii) Identifying the particular requirements of Part 818 and the regulatory program which are to be complied with, in lieu of the otherwise applicable provisions of Section 515(b)(16) of the Act, 30 CFR 816.100–816.123 and the regulatory program; and

(iii) Providing a detailed schedule for compliance with the particular requirements of Part 818 and the regulatory program identified under paragraph (e)(9)(i) of this Section.

(f) *Review of permits containing variances.*

Variances granted under permits issued under this Section shall be reviewed by the regulatory authority no later than 3 years from the dates of is-

suance of the permit and any permit renewals.

§ 785.19 Surface coal mining and reclamation operations on areas or adjacent to areas including alluvial valley floors in the arid or semi-arid areas west of the 100th meridian.

(a) *Scope.* This section applies each person who conducts or intends to conduct surface coal mining and reclamation operations which may affect alluvial valley floors in the arid or semi-arid areas of the United States located west of the 100th meridian.

(b) No person shall engage in surface coal mining and reclamation operations subject to this Section, except under a permit issued by the regulatory authority in accordance with the requirements of 30 CFR 786.17.

(c) *Pre-application reconnaissance investigation and report.*

(1) Before applying for a permit to conduct surface coal mining and reclamation operations within a valley holding a stream or within 2 miles of any stream in the arid or semi-arid areas of the United States located west of the 100th meridian west longitude, the applicant shall submit to the regulatory authority the results of a field investigation of the lands proposed to be affected. The field investigators shall include sufficiently detailed geologic, hydrologic, land use, soils, and vegetation studies on areas determined in consultation with the regulatory authority to enable the regulatory authority to make a determination as to the existence of an alluvial valley floor in or near the proposed permit area. The Secretary may also choose to publish the results of alluvial valley floor mapping in which case all areas so mapped would be considered alluvial valley floors for the purposes of this paragraph. Studies performed during the investigation by the applicant shall include—

(i) Mapping of all unconsolidated stream-laid deposits holding streams including, but not limited to, geologic maps of all unconsolidated deposits, and all stream-laid deposits, maps of streams, delineation of surface watersheds and directions of shallow ground water flows through and into the unconsolidated deposits, topography showing local and regional terrace levels, and topography of terraces, flood plains and channels showing surface damage patterns.

(ii) Mapping of all lands included in the area in accordance with paragraph (i) of this Section and subject to agricultural activities, showing the area in which different types of agricultural lands, such as flood irrigated lands, pasture lands and undeveloped rangeland exist, and accompanied by measurements of vegetation in terms of productivity and type.

(iii) Mapping of all lands that were flood irrigated during any 5 years or more out of the 20 years immediately preceding the date of the field investigation showing the location of each diversion structure, ditch, dam related reservoir, irrigated land, and topography there.

(iv) Documentation that areas identified in paragraph (i) of this Section are, or are not, subirrigated based on appropriate combination of ground water monitoring measured 1 year's site data, soil moisture measurements, and measurements of rooting depth, soil, mottling, and water requirements of vegetation.

(v) Documentation that areas identified in paragraph (i) of this Section are, or are not, flood irrigable based on streamflow, water quality, water yield, soils measurements and topographic characteristics and based on a minimum of 1 year of on-site data.

(vi) Analysis of a series of aerial photographs including color infrared imagery flown at a time of year to show any late summer and fall differences between upland and valley floor vegetative growth and of a scale adequate for reconnaissance identification of areas that may be alluvial valley floors.

(vii) Maps showing farms that could be affected by the mining and, if any farm includes an alluvial valley floor, statements of the type and quantity of agricultural activity performed on the alluvial valley floor and its relationship to the farm's total agricultural activity including an economic analysis.

(2) Based on the studies conducted under Section 785.19(c)(1), the regulatory authority shall make a determination of the extent of any alluvial valley floors within the study area and whether any stream in the study area may be excluded from further consideration as lying within an alluvial valley floor. These determinations shall be based on—

(i) The presence of unconsolidated streamlaid deposits holding streams; and,

(ii) The availability of sufficient water to support agricultural activities by delineation of:

(A) The existence of flood irrigation in the area in question or its historical use;

(B) The capability of an area to be flood irrigated, based on stream-flow water yield, soils, water quality, and topography; or,

(C) Subirrigation of the lands in question derived from the ground water system of the valley floor and not artificially maintained by ponds or reservoirs.

(d) *Application contents for operations affecting designated alluvial valley floors.*

(1) If land within or adjacent to the proposed permit area is identified as an alluvial valley floor and the proposed mining operation may affect that land, the applicant shall submit a complete application for the proposed mining and reclamation to be used by the regulatory authority together with other relevant information as a basis for approval or denial of the permit under Part 786. The complete application shall include detailed surveys and baseline data required by the regulatory authority for a determination of—

(i) The characteristics of the alluvial valley floor which are necessary to preserve the essential hydrologic functions during and after mining;

(ii) The significance of the area to be affected to agricultural activities;

(iii) Whether the operation will cause, or presents an unacceptable risk of causing, material damage to the quantity or quality of surface or ground waters that supply the alluvial valley floor; and

(iv) The effectiveness of proposed reclamation and identification of specific standards of performance against which the requirements of Part 822 of this chapter may be measured, including protection from damage by underground mining such as by a change in quantity or quality of water by such mining.

(2) Information required under this paragraph shall include, but not be limited to—

(i) Geologic data, including geologic structure, and surficial geologic maps, and geologic cross-sections;

(ii) Soils and vegetation data, including a detailed soil survey and chemical and physical analyses of soils, a vegetation map and narrative descriptions of quantitative and qualitative surveys and land use data including an evaluation of crop yields;

(iii) Surveys and data required under this paragraph for areas-designated as alluvial valley floors because of their flood irrigation characteristics, shall also include at a minimum, surface hydrologic data, including streamflow recording for a 1-year period, runoff, and sediment yield, field geomorphic surveys and other geomorphic study, and water quality analyses for a full year;

(iv) Surveys and data required under this paragraph for areas designated as alluvial valley floors because of their subirrigation characteristics, shall also include, at a minimum, geohydrologic data including observation well establishment, water level measurements, ground water contour maps, testing to determine aquifer characteristics that affect waters supplying the alluvial valley floors, well and spring inventories, water quality analyses, and physical and chemical analysis of over-

burden to determine the effect of mining and reclamation on water quality and quantity;

(v) Plans showing how the operation will avoid, during mining and reclamation, the interruption, discontinuance or preclusion of farming on the alluvial valley floors and will not materially damage the quantity or quality of water in surface and ground water systems that supply such valley floors; and

(vi) Such other data as the regulatory authority may require.

(3) The surveys required by this paragraph should identify those geologic, hydrologic, and biologic characteristics of the alluvial valley floor necessary to support the essential hydrologic functions of an alluvial valley floor. Characteristics which support the essential hydrologic functions and which must be included in a complete application include, but are not limited to:

(i) Characteristics supporting the function of collecting water which include, but are not limited to—

(A) the amount and rate of runoff and a water balance analysis with respect to rainfall, evapotranspiration, infiltration and ground water recharge;

(B) the relief, slope, and density of the network of drainage channels;

(C) the infiltration, permeability, porosity and transmissivity of unconsolidated deposits of the valley floor that either constitute the aquifer associated with the stream or lie between the aquifer and the stream; and

(D) other factors that effect the interchange of water between surface streams and ground water systems including the depth to ground water, the direction of ground water flow, the extent to which the stream and associated alluvial ground water aquifers provide recharge to, or are recharged by bedrock aquifers.

(ii) Characteristics supporting the function of storing water which include, but are not limited to—

(A) surface roughness, slope, and vegetation of the channel, flood plain, and low terraces that retard the flow of surface waters;

(B) porosity, permeability, water-holding capacity, saturated thickness and volume of aquifers associated with streams, including alluvial aquifers, perched aquifers, and other water bearing zones found beneath valley floors; and

(C) moisture held in soils or the plant growth medium within the alluvial valley floor, and the physical and chemical properties of the subsoil that provide for sustained vegetation growth or cover during extended periods of low precipitation.

(iii) Characteristics supporting the function of regulating the flow of water which include, but are not limited to—

(A) the geometry and physical character of the valley expressed in terms of the longitudinal profile and slope of the valley and the channel, the sinuosity of the channel, the cross-section, slopes and proportions of the channels, flood plains and low terraces, the nature and stability of the stream banks and the vegetation established in the channels and along the stream banks and flood plains;

(B) the nature of surface flows as shown by the frequency and duration of flows of representative magnitude including low flows and floods; and

(C) the nature of interchange of water between streams, their associated alluvial aquifers and any bedrock aquifers as shown by the rate and amount of water supplied by the stream to associated alluvial and bedrock aquifers (i.e., recharge) and by the rates and amounts of water supplied by aquifers to the stream (i.e., baseflow);

(iv) Characteristics which make water available and which include, but are not limited to—

(A) the presence of land forms including flood plains and terraces suitable for agricultural activities;

(e) Each application for a permit under this Section shall be granted or denied according to the requirements of 30 CFR 786.17. In making a determination according to those criteria, a change in the post-mining land use compared to the land use prior to any mining shall be allowed in or adjacent to alluvial valley floors only when the essential hydrologic functions of the alluvial valley floor will be preserved.

§ 785.20 Augering.

(a) This Section applies to any person who conducts or intends to conduct surface coal mining and reclamation operations utilizing augering operations.

(b) Any application for a permit for operations covered by this Section shall contain, in the mining and reclamation operation plan, the augering methods to be used and the measures to be used to comply with 30 CFR 819.

(c) No permit shall be issued for any operations covered by this Section, unless the regulatory authority finds, in writing, that in addition to meeting all other requirements of this Subchapter, the operation will be conducted in compliance with 30 CFR 819.

§ 785.21 Coal processing plants and support facilities not located within the permit area of a specified mine.

(a) This section applies to any person who conducts or intends to conduct surface coal mining and reclamation operations involving coal processing plants and support facilities not within a permit area of a specific mine. Any person who operates a processing plant or support facility shall have obtained a permit from the regulatory authority under the regulatory program in accordance with the requirements of this Section.

(b) Any application for a permit for operations covered by this Section shall contain in the mining and reclamation plan, specific plans, including descriptions, maps and cross-sections of the construction, operation, maintenance and removal of the processing plants and associated support facilities. The plan shall demonstrate that those operations will be conducted in compliance with 30 CFR 827.

(c) No permit shall be issued for any operation covered by this Section, unless the regulatory authority finds, in writing, that, in addition to meeting all other applicable requirements of this Subchapter, the operations will be conducted in compliance with the requirements of 30 CFR 827.

§ 785.22 In situ processing activities.

(a) This Section applies to any person who conducts or intends to conduct surface coal mining and reclamation operations utilizing in situ processing activities.

(b) Any application for a permit for operations covered by this Section shall be made according to all requirements of this Subchapter applicable to underground mining activities. In addition, the mining and reclamation operations plan for operations involving in situ processing activities shall contain information establishing how those operations will be conducted in compliance with the requirements of 30 CFR 828, including—

(1) Delineation of proposed holes and wells and production zone for approval of the regulatory authority;

(2) Specifications of drill holes and casings proposed to be used;

(3) A plan for treatment, confinement or disposal of all acid-forming, toxic-forming or radioactive gases, solids, or liquids constituting a fire, health, safety or environmental hazard caused by the mining and recovery process; and

(4) Plans for monitoring surface and groundwater and air quality.

(c) No permit shall be issued for operations covered by this Section, unless the regulatory authority first finds, in writing, upon the basis of a complete application made in accordance with paragraph (b) of this Section, that the operation will be conducted in compliance with all requirements of this Subchapter relating to underground mining activities, and 30 CFR 817 and 828.

PART 786—TERMS AND CONDITIONS OF PERMITS AND CRITERIA FOR APPROVAL OR DENIAL OF PERMITS

Sec.
786.1 Scope.
786.2 Objectives.
786.4 Responsibility.
786.11 Permit terms.
786.12 Conditions of permits: General and right of entry.
786.13 Conditions of permits: Environment, public health and safety.
786.15 Criteria for permit approval or denial: General.
786.17 Criteria for permit approval or denial: Alluvial valley floors.

AUTHORITY: Secs. 201, 501, 503, 505, 506, 507, 508, 509, 515, 516, 517, and 522, Pub. L. 95-87 (30 U.S.C. Sections 1211, 1251, 1255, 1256, 1257, 1258, 1259, 1260, 1265, 1266, 1267, and 1272).

§ 786.1 Scope.

This Part sets forth the minimum requirements for the approval or denial of permits to conduct surface coal mining and reclamation operations and for the terms and conditions of permits issued under regulatory programs.

§ 786.2 Objectives.

The objective of this Part is to provide the minimum requirements for the terms and conditions of permits issued under regulatory programs and the criteria by which regulatory authorities determine whether to approve or deny such permits.

§ 786.4 Responsibility.

The State regulatory authority has the responsibility to approve or deny permits under an approved State program. The Regional Director has the responsibility to approve or deny permits under a Federal program.

§ 786.11 Permit terms.

(a) Each permit shall be issued for a fixed term not to exceed 5 years. A longer fixed permit term may be granted if—

(1) The application is full and complete for the specified longer term; and

(2) The applicant shows that a specified longer term is reasonably needed to allow the applicant to obtain necessary financing for equipment needed for opening of the operation and this need is confirmed, in writing, by the applicant's proposed source for the financing.

(b) (1) A permit shall terminate, if the permittee has not begun the surface coal mining and reclamation operation covered by the permit within 3 years of the issuance of the permit.

(2) The regulatory authority may grant reasonable extensions of time for commencement of these operations upon a written showing that such extensions of time are necessary, if—

(i) Litigation precludes the commencement or threatens substantial economic loss to the permittee, or

(ii) There are conditions beyond the control and without the fault or negligence of the permittee.

(3) With respect to coal to be mined for use in a synthetic fuel facility or specified major electric generating facility, the permittee shall be deemed to have commenced surface mining operations at the time that the construction of the synthetic fuel or generating facility is initiated.

(4) Extensions of time granted by the regulatory authority under subparagraph (b)(2) of this section shall be specifically set forth in the permit and notice of the extension shall be made to the public.

(c) Permits may be suspended, revoked, or modified by the regulatory authority, in accordance with 30 CFR Part 736 and 30 CFR 785.13, 785.15, 785.16, 785.18 and 790.11.

§ 786.12 Conditions of permits: General and right of entry.

Each permit issued by the regulatory authority shall ensure that—

(a) Except to the extent that the regulatory authority otherwise directs in the permit that specific actions be taken, the permittee shall conduct all surface coal mining and reclamation operations as described in the complete application; and

(b) The permittee shall allow the authorized representatives of the Secretary, including, but not limited to, inspectors and fee compliance officers and the State regulatory authority, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay, to—

(1) Enter upon or through any surface coal mining and reclamation operations to:

(i) Inspect any coal mining and reclamation operation, monitoring equipment, or procedure conducted pursuant to the permit; and

(ii) Collect samples and other relevant information regarding air or water, fish and wildlife, soils, vegetation and other resources protected under the Act, this Chapter and the State program; and

(iii) Obtain access to and copy any records required to be maintained under the terms and conditions of the permit or the regulatory program.

(2) Be accompanied by private persons for the purpose of conducting an inspection in accordance with 30 CFR Parts 840 and 842.

(c) The permittee shall conduct surface coal mining and reclamation operations only on those lands specifically designated on the map submitted under 30 CFR 779 or 783 and approved for the term of the permit.

§ 786.13 Conditions of permits: Environment, public health and safety.

Each permit issued by the regulatory authority shall ensure and shall contain conditions requiring that the—

(a) Permittee shall take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of the permit, including, but not limited to:

(1) Any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance;

(2) Immediate implementation of measures necessary to comply; and

(3) Warning, as soon as possible after learning of such noncompliance, any person who may be adversely affected by the noncompliance.

(b) The permittee shall dispose of solids, sludge, filter backwash, or pollutants removed in the course of treatment or control of waters or emissions to the air in the manner required by Subchapter K of this Chapter, the regulatory program and which prevents violation of any other applicable State or Federal law.

(c) The permittee shall take other actions that further the terms and conditions of the permit, purposes and provisions of the Act, this Chapter, and the State program.

§ 786.15 Criteria for permit approval or denial: General.

No permit or revision application shall be approved, unless the application demonstrates and the regulatory authority finds, in writing, on the basis of information set forth in the application or from information otherwise available, which is documented in the approval and made available to the applicant, that—

(a) The permit application is accurate and complete and that all requirements of the Act, this Chapter, and the regulatory program have been complied with.

(b) The applicant has demonstrated that surface coal mining and reclamation operations, as required by the Act, this Chapter, and the regulatory program can be accomplished under the mining operations and reclamation plan contained in the permit application.

(c) The assessment of the probable cumulative effect of all anticipated coal mining in the area on the hydrologic balance, as described in 30 CFR 780.21(c) or 784.13(c), has been made by the regulatory authority, and the operations proposed under the application have been designed to prevent

damage to the hydrologic balance outside the permit area.

(d) The area within the proposed permit is:

(1) Not included within an area designated unsuitable for surface coal mining under 30 CFR 764; or

(2) Not within an area under study for designation as unsuitable for coal mining in an administrative proceeding begun under 30 CFR 764 unless the applicant demonstrates that, before January 1, 1977 he has made substantial legal and financial commitments in relation to the operation for which he is applying for a permit; or,

(3) Not on any lands subject to the prohibition or limitation of Section 761.11 (a), (f), or (g); or

(4) Not within 100 feet of the outside right-of-way line of any public road, except as provided for in Section 761.12(d); or

(5) Not within 300 feet from any occupied dwelling, except as provided for in Sections 761.11(e) and 761.12(e).

(e) The proposed operations will not adversely affect any publicly-owned parks or places included or eligible for listing in the National Register of Historic Places, except as provided for in 30 CFR 761.12(b).

(f) For operations involving the surface mining of coal where the private mineral estate to be mined has been severed from the private surface estate, the applicant has submitted to the regulatory authority the documentation required under Section 778.15(b).

(g) The applicant has submitted proof that any violation identified under Section 788.12(c) has been corrected or is in the process of being corrected to the satisfaction of the regulatory authority, department, or agency which has jurisdiction over such violation.

(h) The applicant or the operator, if other than the applicant, does not control and has not controlled mining operations with a demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment that indicates an intent not to comply with the provisions of the Act.

(i) Surface coal mining and reclamation operations to be performed under the permit are not inconsistent with other such operations anticipated to be performed in areas adjacent to the proposed permit area.

(j) The applicant has submitted the performance bond or other equivalent guarantee required under Subchapter J and the regulatory program.

(k) The applicant has, with respect to prime farmland, obtained either a negative determination under Section 785.19 or has satisfied the requirements of 30 CFR 785.19 for the mining of prime farmland.

(l) The proposed post-mining land use of the permit area has been approved by the regulatory authority in accordance with the requirements of 30 CFR 816.124 or 817.124.

(m) The regulatory authority has made all specific approvals required under Part 816 or Part 817 of this Chapter.

§ 786.17 Criteria for permit approval or denial: Alluvial valley floors.

(a) No permit or revision application, for surface coal mining and reclamation operations on lands located west of the one hundredth meridian west longitude, shall be approved by the regulatory authority, unless the application demonstrates and the regulatory authority finds, in writing, on the basis of information set forth in the application in accordance with Section 785.18, that—

(1) The proposed operations would not interrupt, discontinue, or preclude farming on alluvial valley floors, unless the premining land use has been undeveloped range land which is not significant to farming on the alluvial valley floors, or unless the area of affected alluvial valley floor is small and provides, or may provide, negligible support for production of one or more farms; and

(2) The proposed operations would not materially damage the quantity or quality of water in surface or underground water systems that supply alluvial valley floors; and

(3) The application establishes that the proposed operations would be conducted in accordance with 30 CFR 822.

(b) This section does not apply to those surface coal mining operations that—

(1) Were in production in the year preceding August 3, 1977, were located in or adjacent to an alluvial valley floor, and produced coal in commercial quantities during the year preceding August 3, 1977; or

(2) Had specific permit approval by the State regulatory authority before August 3, 1977, to conduct surface coal mining operations for an area within an alluvial valley floor.

(c) The significance of the impact of the proposed operations on farming will be based on the importance of the grazed or hayed alluvial valley floor area to one or more farm's production, or any more stringent criteria established by the regulatory authority as suitable for site-specific protection of agricultural activities in alluvial valley floors. The effect of the proposed operations on farming will be concluded to be significant, if they would eliminate, over the life of the mine, 10 percent or more of the grazing area of the farm or 10 percent or more of the hayed, cropped or otherwise harvested lands of the farm.

(d) (1) Materially damage as used in this section means changes in the quality or quantity of the water supply to any portion of an alluvial valley floor, where such changes are caused by surface coal mining and reclamation operations and result in changes in ground water quantity or quality that cause significant and adverse changes in composition, diversity, or productivity of vegetation dependent on subirrigation, or which result in changes in surface water quality and quantity that would limit the adequacy of the water for flood irrigation of the irrigable land acreage existing prior to mining.

(2) Criteria for determining that material damage would occur include, but are not limited to—

(i) Potential increases in the concentration of total dissolved solids of waters supplied to any portion of an alluvial valley floor, as measured by specific conductivity in millimhos, to levels above the threshold value at which crop yields decrease:

(A) As specified in Moss and Hoffman, Crop-Salt Tolerances—Current Assessment, June 1977, Journal of Irrigation and Drainage Division of the American Society of Civil Engineers; unless the applicant demonstrates, through testing related to crops in the locality of the proposed operations, taking into account water relationships, that higher threshold values will not result in crop yield decreases; or,

(B) For types of vegetation not listed pursuant to (A), as specified by the regulatory authority, based upon consideration of observed correlation between total dissolved solid concentrations in water and crop yield declines, taking into account an adequate margin of safety;

(ii) Potential increases in the average depth to water saturated zones (during the growing season) located within one root zone of the alluvial valley floor that would reduce the amount of subirrigable land compared to pre-mining conditions;

(iii) Potential decreases in surface flows that would reduce the amount of irrigable land compared to pre-mining conditions; and

(iv) Potential changes in the surface or ground water systems that reduce the area available to agriculture through flooding or water logging.

(e) For the purposes of this paragraph, a farm or ranch is generally considered to be a coherent land unit with acreage and boundaries in existence prior to August 3, 1977 or, if established after August 3, 1977, with those boundaries based on enhancement of the units' agricultural produc-

tivity and not related to surface coal mining operations.

PART 787—PUBLIC PARTICIPATION IN PERMIT REVIEW PROCESS

Sec.
787.1 Scope.
787.2 Objectives.
787.4 Responsibilities.
787.11 Public notices of filing of permit applications.
787.12 Opportunity for submission of written comments on permit applications.
787.13 Right to file written objections.
787.14 Informal conferences.
787.15 Public availability of information in permit applications on file with the regulatory authority.

AUTHORITY: Secs. 102(i), 201, 501, 503, 507, 508, 510, 513, and 522(e), Pub. L. 95-87 (30 U.S.C. Section 1202(i), 1211, 1251, 1253, 1257, 1258, 1260, 1263, and 1272(e)).

§ 787.1 Scope.

This Part establishes the minimum requirements for the Secretary's approval of the provisions of regulatory programs for public participation in the permit process under such programs.

§ 787.2 Objectives.

The objectives of this Part are to provide for broad and effective public participation in the review, issuance or denial of permits by regulatory authorities under regulatory programs.

§ 787.4 Responsibilities.

(a) The regulatory authority and persons attempting to obtain permits under regulatory programs shall fully involve the public throughout the permit process of regulatory programs.

(b) The regulatory authority shall insure that the requirements of this Part are implemented under regulatory programs.

§ 787.11 Public notices of filing of permit applications.

(a) An applicant for a permit shall place an advertisement in a local newspaper of general circulation in the locality of the proposed surface mine, at least once a week for four consecutive weeks. The applicant shall place the advertisement in the newspaper at the same time the permit application is filed with the regulatory authority. The advertisement shall contain, at a minimum, the following information:

(1) the name and business address of the applicant, and

(2) a map describing the exact location and boundaries of the proposed site, which shall—

(i) Identify the area of the proposed operation to correspond with the area proposed under the permit application;

(ii) Be large enough to allow local residents to readily identify the proposed permit area;

(iii) Indicate the north point for the U.S. Geological Survey Quadrangle map in which the proposed operation is contained, and the precise location of the proposed operations; and

(iv) Indicate the names and locations of all streams or other bodies of surface water, roads, and communities shown in the U.S. Geological Survey Quadrangle map for the area in which the proposed operation will occur; and

(3) The location where a copy of the application is available for public inspection under paragraph (c) of this Section; and

(4) The name and address of the regulatory authority to which written comments, objections, or requests for informal conferences on the application may be submitted under Section 787.14.

(5) If an applicant seeks a permit to mine within 100 feet of the outside right-of-way of a public road or to relocate such a road under 30 CFR 761.12(d), the advertisement shall contain a concise statement describing the public road, the particular part to be relocated, where the relocation is to occur, and the duration of the relocation.

(b) Upon receipt of an application for a permit, the regulatory authority shall issue written notification of—

(1) The applicant's intention to surface mine a particularly described tract land,

(2) The application number,

(3) Where a copy of the application may be inspected, and

(4) Where comments on the application may be submitted under Section 787.12 of this Part.

(c) The written notifications shall be sent to—

(1) Federal, State and local government agencies with jurisdiction over or an interest in the area of the proposed operations, including, but not limited to, general governmental entities and fish and wildlife and historic preservation agencies;

(2) Governmental planning agencies with jurisdiction to act with regard to land use, air or water quality planning in the area of the proposed operations;

(3) Sewage and water treatment authorities and water companies, either providing sewage or water services to users in the area of the proposed operations or having water sources or collection, treatment, or distribution facilities located in these areas;

(4) The Federal or State Governmental agencies with authority to issue all other permits and licenses needed by the applicant in connection with operations proposed in the application; and

(5) Other persons who have requested, in writing, that the regulatory authority provide notice of proposed surface coal mining and reclamation operations in the area involved.

(d)(1) The applicant shall make a full copy of his application for a permit available for the public to inspect and copy. This can be done by filing a copy of the application submitted to the regulatory authority with the recorder at the courthouse of the county where the mining is proposed to occur. The regulatory authority may approve filing at another equivalent public office.

(2) The applicant shall file the copy by the last date of newspaper advertisement of the application. The applicant shall file any subsequent revision with the public office at the same time the revision is submitted to the regulatory authority.

(3) The copy filed in the public office does not have to include that information which pertains solely to analysis of the chemical and physical properties of the coal to be mined (except information regarding such mineral or elemental content which is potentially toxic in the environment).

§ 787.12 Opportunity for submission of written comments on permit applications.

(a) Written comments on permit applications may be submitted to the regulatory authority by—

(1) The public entities to whom notification is provided under Section 787.11(c)(1)-(5), with respect to the effects of the proposed mining operations on the environment within their area of responsibility; and,

(2) Other persons to whom notification has been provided under Subsection 787.11(a) and 787.11(c)(6).

(b) These comments shall be submitted to the regulatory authority in the manner and within the reasonable time provided for in the regulatory program.

(c) The regulatory authority shall immediately transmit a copy of all such comments for filing and public inspection at the public office where the applicant filed a copy of the application for permit under Section 787.11(d).

§ 787.13 Right to file written objections.

(a) Any person including an officer or head of any Federal, State, or local government agency or authority shall have the right to file written objections to an initial or revised application for a permit with the regulatory authority, within 30 days after the last publication of the newspaper notice required by Section 787.11(a).

(b) The regulatory authority shall, immediately upon receipt of any written objections—

(1) Transmit a copy of them to the applicant; and,

(2) File a copy for public inspection at the public office where the applicant filed a copy of the application for permit under Section 787.11(d).

§ 787.14 Informal conferences.

(a) *Procedure for requests.* Any person including the officer or head of any Federal, State or local government agency or authority may, in writing, request that the regulatory authority hold an informal conference on any application for a permit. The request shall—

(1) Briefly summarize the issues to be raised by the requestor at the conference;

(2) State whether the requestor desires to have the conference conducted in the locality of the proposed mining;

(3) Be filed not later than 30 days after the last publication of the newspaper advertisement placed by the applicant under Section 787.11(a).

(b) Except as provided in (c) below, if an informal conference is requested in accordance with paragraph (a) of this Section, the regulatory authority shall hold an informal conference within a reasonable time following the receipt of such objections and request. The informal conference shall be conducted according to the following requirements:

(1) If requested under paragraph (a) of this section, it shall be held in the locality of the proposed mining.

(2) The date, time and location of the informal conference shall be advertised by the regulatory authority in a newspaper of general circulation in the locality of the mine at least two weeks prior to the scheduled conference.

(3) If requested, in writing, by a conference requestor in a reasonable time prior to the conference, the regulatory authority may arrange with the applicant to grant parties to the conference access to the mine area for the purpose of gathering information relevant to the conference.

(4) The purpose of the informal conference shall be the examination of issues raised in the written objections, comments, and requests for conferences filed with the regulatory authority on the permit application.

(5) The requirements of Section 554 of Title V of the United States Code shall not apply to the conduct of the informal conference. The conference shall be conducted by a representative of a State regulatory authority, who may accept oral or written statements and any other relevant information from any party to the conference. An electronic or stenographic record shall be made of the conference proceeding, unless waived by all the parties. The record shall be maintained and shall be accessible to the parties to the conference until final release of the applicant's performance bond pursuant to Subchapter J.

(c) If all parties requesting the informal conference stipulate agreement before the requested informal conference and withdraw their request, the informal conference need not be held.

(d) Informal conferences held in accordance with this Section may be used by the regulatory authority as the public hearing on proposed uses of public roads or relocation thereof by the applicant under 30 CFR 761.12(d).

§ 787.15 Public availability of information in permit applications on file with the regulatory authority.

(a) Information contained in permit applications on file with the regulatory authority shall be open for public inspection and copying at reasonable times: *Provided,* That—

(1) Information pertaining to coal seams, test borings, core samplings, or soil samples in permit applications shall be made available for inspection and copying to any person with an interest which is or may be adversely affected; and

(2) Information in permit applications which pertains only to the analysis of the chemical and physical properties of the coal to be mined (excepting information regarding mineral or elemental contents of such coal, which are potentially toxic in the environment) shall, upon the written request of the applicant, be kept confidential and not made a matter of public record; and

(3) Information in the reclamation plan portions of the application, which is required to be filed with the regulatory authority under Section 508 of the Act and which is not on public file pursuant to State law, shall be held in confidence by the regulatory authority upon the written request of the applicant.

(b) The regulatory authority shall provide for procedures to maintain information required to be kept confidential under paragraph (a) separately from other portions of the permit application. This information shall be clearly identified by the applicant and submitted separately from other portions of the application.

PART 788—REGULATORY AUTHORITY REVIEW AND DECISIONS ON PERMIT APPLICATIONS

Sec.
788.1 Scope.
788.2 Objectives.
788.3 Responsibilities.
788.12 Review of permit applications.
788.13 Permit approval or denial actions.

AUTHORITY: Secs. 102(i), 201, 501, 503, 506, 507, 508, 509, 510, 511, 513, 514, 517, and 522(e), Pub. L. 95-87 (U.S.C. Sections 1202(i), 1211, 1251, 1253, 1256, 1257, 1258, 1259, 1260, 1261, 1263, 1264, 1267, and 1277(e)).

§ 788.1 Scope.

This Part establishes the minimum requirements for the Secretary's approval of the provisions of regulatory programs for the review of permit applications and decisions on these applications by regulatory authorities under these programs.

§ 788.2 Objective.

The objective of this Part is to insure timely and thorough review by the regulatory authority of each permit application under a regulatory program.

§ 788.3 Responsibilities.

(a) The applicant has the responsibility of insuring that all information is provided in a complete permit application for the review by the regulatory authority in accordance with this Part and a regulatory program.

(b) The regulatory authority shall conduct timely and thorough reviews of each complete permit application under a State program.

§ 788.12 Review of permit applications.

(a) The regulatory authority shall review the complete application, written comments, written objections submitted and records of any informal conference held under 30 CFR Part 787.

(b) If the regulatory authority decides to approve the application, it shall require that the applicant file the performance bond or provide other equivalent guarantee before the permit is issued, in accordance with the provisions of 30 CFR Subchapter J.

(c) If the regulatory authority determines from either the schedule submitted as part of the application under 30 CFR 778.14(c) or 782.14(c) of this Subchapter, or from other available information, that any surface mining operations owned or controlled by the applicant is currently in violation of the Act, or of any law, rule, or regulation of the United States, or of any State or Federal department or agency pertaining to soil or water environmental protection, the regulatory authority shall require the applicant to submit proof, satisfactory to the regulatory authority, department, or agency which has jurisdiction over such violation, before the issuance of the permit, that the violation—

(1) Has been corrected; or

(2) Is in the process of being corrected.

(d) Before any final determination by the regulatory authority that the applicant, or the operator specified in the application, controls or has con-

trolled mining operations with a demonstrated pattern of willful violation of the Act of such nature, duration, and with such resulting irreparable damage to the environment that indicates an intent not to comply with the provision of the Act, the applicant or operator shall be afforded an opportunity for an adjudicatory hearing on the determination as provided for in the regulatory program.

§ 788.13 Permit approval or denial actions.

(a) The regulatory authority shall grant, require modification of, or deny all applications for permits under State programs according to the requirements of 30 CFR 786 and on the basis of—

(1) Complete applications for permits and revisions or renewals thereof;

(2) Public participation as provided for by Part 787 of this Subchapter;

(3) Compliance with any applicable provisions of Part 785 of this Subchapter; and

(4) Processing and review of applications as required by this Part.

(b) The regulatory authority shall take action as required under paragraph (a) of this Section, within the following times—

(1) *Initiation of regulatory programs.* Except as provided for in subparagraph (b)(3), a complete application submitted to the regulatory authority within the time required by 30 CFR 771.19(b)(1) shall be processed by the regulatory authority so that a permit is granted or denied—

(i) Within eight months after the date of approval of a regulatory program, unless a State or its regulatory authority is specifically enjoined from submitting a State program, or the regulatory authority is specifically enjoined from implementing a regulatory program but in no case later than February 3, 1981; and,

(ii) If an informal conference has been held pursuant to Part 787 of this Subchapter, within 60 days from the close of the conference.

(2) *Subsequent operation of regulatory programs.* A complete application submitted to the regulatory authority after the time required in 30 CFR 771.19 (b) (1) shall be processed by the regulatory authority, so that a permit is granted or denied within the following times:

(i) If an informal conference has been held under Part 787 of this Subchapter, within 60 days of the close of the conference; or

(ii) If no informal conference has been held under Part 787, then within a reasonable time after the receipt by the regulatory authority of the complete application. The regulatory authority shall determine the time for processing and shall establish provisions for the processing time in the regulatory program, taking into account—

(i) The time needed for proper investigation of the proposed permit and adjacent areas;

(ii) The complexity of the application; and

(iii) Whether written objections or comments to the complete application have been filed with the regulatory authority.

(3) Notwithstanding any of the foregoing provisions of this Section, no time limit under the Act or this Section requiring the regulatory authority to act is considered expired from the time the regulatory authority initiates a proceeding under 30 CFR 788.12(d) until the final decision of the hearing body.

(c) If an informal conference is held under 30 CFR Part 787 the regulatory authority shall, give its written findings to the permit applicant and to each person who is a party to the conference, granting or denying the permit in whole, or in part, and stating the reasons therefor in the decision. The regulatory authority shall simultaneously transmit a copy of such findings and any permit issued to the Regional Director.

(d) If no such informal conference has been held, the regulatory authority shall give its written decision to the permit applicant, granting or denying the permit in whole, or in part, and stating the reasons in the decision. Simultaneously, the regulatory authority shall—

(1) Give a copy of its decision to:

(i) Each person and government official who filed a written objection or comment with respect to the application; and

(ii) Together with a copy of any permit issued, to the Regional Director; and

(2) Publish a summary of its decision in a newspaper or similar periodical of general circulation in the general area of the proposed operation.

(e) Within 10 days after the granting of a permit, the regulatory authority shall notify the local government officials in the local political subdivision in which the area of land to be affected is located that a permit has been issued and shall describe the location of the lands within the permit area.

PART 789—ADMINISTRATIVE AND JUDICIAL REVIEW OF DECISIONS BY REGULATORY AUTHORITY ON PERMIT APPLICATIONS

Sec.
789.1 Scope.
789.2 Objectives.
789.11 Administrative review.
789.12 Judicial review.

AUTHORITY: Secs. 102(i), 201, 501, 503, 514, and 526, Pub. L. 95-87 (30 U.S.C. Sections 1202(i), 1211, 1251, 1253, 1264 and 1276).

§ 789.1 Scope.

This Part provides the minimum requirements for the Secretary's approval of regulatory program provisions for administrative and judicial review of decisions by, or the failure of the regulatory authority to act, on applications for permits.

§ 789.2 Objectives.

The objectives of this Part are to provide for timely and thorough review by administrative and judicial bodies under regulatory programs on decisions of and failures to act by regulatory authorities on permit applications.

§ 789.11 Administrative review.

(a) Within 30 days after the applicant is notified of the final decision of the regulatory authority on the permit application, the applicant or any person with an interest which is or may be adversely affected may request a hearing on the reasons for the final determination.

(b) The regulatory authority shall hold the hearing within 30 days of such request. This hearing shall be of record, adjudicatory in nature, and no person who presided at an informal conference under Section 787.14 of this Subchapter shall either preside at the hearing, or participate in the decision thereon, or in any administrative appeal therefrom.

(c) The hearing authority may, under such conditions as it may prescribe, grant such temporary relief as it deems appropriate, pending final determination of the proceeding, if:

(1) All parties to the proceeding have been notified and given an opportunity to be heard on a request for temporary relief;

(2) The person requesting such relief shows that there is a substantial likelihood that he will prevail on the merits of the final determination of the proceeding; and

(3) The relief is not to adversely affect the public health or safety or cause significant, imminent environmental harm to land, air or water resources; and

(4) The relief sought is not the issuance of a permit where a permit has been denied, in whole or in part, by the regulatory authority.

(d) For the purpose of such hearing, the regulatory authority may administer oaths and affirmations, subpoena witnesses, or written, or printed materials, compel attendance of witnesses, or production of the materials, and take evidence, including, but not limited to, site inspections of the land to be affected and other surface coal mining

operations carried on by the applicant in the general vicinity of the proposed operation. A verbatim record of each public hearing required by this Section shall be made, and a transcript made available on the motion of any party or by order of the regulatory authority.

(e) Within 30 days after the hearing, the regulatory authority shall issue and furnish the applicant, and each person who participated in the hearing, with the written decision of the regulatory authority granting or denying the permit, in whole or in part, and stating the reasons for the decision.

§ 789.12 Judicial review.

(a) Any applicant or any person with an interest which is or may be adversely affected and who has participated in the administrative proceedings as an objector shall have the right to appeal as provided in paragraph (b) of this Section, if—

(1) The applicant or person is aggrieved by the decision of the hearing authority in an administrative review proceeding conducted pursuant to Section 789.11 of this Part; or,

(2) If either the regulatory authority or the hearing authority for administrative review under Section 789.11 fails to act within time limits specified in the Act, this Part, or the regulatory program.

(b) (1) *State programs.* Action of the regulatory authority or hearing authority identified in paragraph (a) of this Section shall be subject to judicial review by a court of competent jurisdiction, as provided for in the State program, but the availability of such review is not to be construed to limit the operation of the rights established in Section 520 of the Act.

(2) *Federal programs.* The action of the regulatory authority or hearing authority identified in paragraph (a) of this section is subject to judicial review by the United States District Court for the district in which the surface coal mining and reclamation operations is or would be located, in the time and manner provided for in section 526 (a)(2) and (b) of the Act. The availibility of such review is not to be considered to limit the operations of rights established in Section 520 of the Act.

PART 790—PERMIT REVISIONS AND REGULATORY AUTHORITY REVIEW OF OUTSTANDING PERMITS

Sec.
790.1 Scope.
790.2 Objectives.
790.11 Regulatory authority review of outstanding permits.
790.12 Permit revisions.

AUTHORITY: Secs. 102(i), 201, 501, 506, 507, 508, 509, 510, 511, 513, 514, 515, 516, 522(c) and 526(f), Pub. L. 95-87 (30 U.S.C. Secs. 1202(i), 1211, 1251, 1256, 1257, 1258, 1259, 1260, 1261, 1263, 1264, 1265, 1266, 1272(e) and 1276(f)).

§ 790.1 Scope.

This Part establishes the minimum requirements for the Secretary's approval of regulatory program procedures for revisions to permits previously issued by the regulatory authority under regulatory programs and for affirmative periodic review by the regulatory authority of all permits previously issued under such programs.

§ 790.2 Objectives.

The objectives of this Part are to:

(a) Ensure that all permits for surface coal mining and reclamation operations are efficiently revised, prior to changes in such operations; and

(b) Ensure that all permits issued under regulatory programs are regularly reviewed by the regulatory authority to determine that surface coal mining and reclamation operations under these permits are conducted in compliance with the Act, this Chapter and the regulatory program.

§ 790.11 Regulatory authority review of outstanding permits.

(a) The regulatory authority shall review each permit issued and outstanding under an approved regulatory program during the term of the permit. This review shall occur not later than the middle of the permit term and as required by 30 CFR 785.13, 785.15, 785.16, and 785.18.

(b) After this review, the regulatory authority may, by order, require reasonable revisions or modification of the permit provisions to ensure compliance with the Act, this Chapter and the regulatory program. The permit revision or modification shall be based upon written findings and subject to notice and hearing requirements established under the regulatory program.

§ 790.12 Permit revisions.

(a) During the term of the permit, and within the time prescribed by 30 CFR 771.19(b)(4), the permittee may submit an application for a revision of the permit, together with a revised mining reclamation operations plan, to the regulatory authority.

(b) A revision to a permit shall be obtained—

(1) For changes in the surface coal mining and reclamation operations described in the original application and approved under the original permit;

(2) When required by an order issued under 30 CFR 790.11;

(3) In order to continue operation after the cancellation or material reduction of the liability insurance policy the capability of self-insurance, the performance bond or other equivalent guarantee upon which the original permit was approved; or

(4) As otherwise required under the State program.

(c) The permit revision application shall be filed in accordance with the following:

(1) The permittee shall submit the application to the regulatory authority within the time provided for by 30 CFR 771.19(b)(4);

(2) The scale or extent of permit application information requirements and procedures, including notice and hearings, applicable to revision requests shall be as provided in the State program. Any application for a revision which proposes significant alterations in the operations described in the materials submitted in the application for the original permit under Parts 778, 779, 780, 781, 782, 783, or 785 of this Subchapter or in the conditions of the original permit, shall, at a minimum, be subject to the requirements of Parts 787 and 789 of this Subchapter.

(d) The regulatory authority shall approve or disapprove the complete application for revision, in accordance with the requirements of Parts 786 and 788, within a reasonable time as established in the regulations for the regulatory program.

(e) Any extensions to the area covered by a permit, except for incidental boundary revisions, shall be made by application for a new permit and shall not be approved under this Part.

PART 791—RENEWALS OF PERMITS

Sec.
791.1 Scope.
791.2 Objectives.
791.11 General requirements.
791.12 Applications for renewals.
791.13 Terms of renewals.
791.14 Approval or denial of renewals.

AUTHORITY: Secs. 201, 501, 506, 507, 508, 509, 510, 515, and 516, Pub. L. 95-87 (30 U.S.C. Secs. 1211, 1251, 1256, 1257, 1258, 1259, 1260, 1265 and 1266).

§ 791.1 Scope.

This Part establishes the minimum requirements for the Secretary's approval of regulatory program procedures for the renewal by the regulatory authority of permits previously issued under such programs.

§ 791.2 Objectives.

The objectives of this Part are to provide for the timely and effective review of applications for renewal of permits previously issued by the regulatory programs. This is necessary to allow surface coal mining and reclamation operations under these programs

to continue, if they comply with the Act, this Chapter and the regulatory program.

§ 791.11 General requirements.

Any valid permit issued pursuant to a regulatory program shall carry with it the right of successive renewal upon expiration, with respect to areas within the boundaries of the existing permit, in accordance with the requirements of this Part.

§ 791.12 Applications for renewals.

(a) *Contents.* Applications for renewals of a permit shall be made within the time prescribed by 30 CFR 771.19(b)(2). Renewal applications shall be in a form and with contents required by the regulatory authority under the regulatory program and in accordance with subparagraph (b)(2) of this Section, including at a minimum, the following:

(1) A statement of the name and address of the permittee, the term of the renewal requested, the permit number, and a description of any changes to the matters set forth in the original application for a permit or prior permit renewals;

(2) A copy of the newspaper notice and proof of publication of same required under Section 787.11(a) of this Subchapter; and,

(3) Evidence that liability insurance policy or adequate self-insurance 30 CFR will be provided by the applicant for the proposed period of renewal.

(b) *Processing and review.*

(1) Application for renewal shall be subject to the requirements of public notification contained in 30 CFR 787.11.

(2) If an application for renewal of a permit includes a proposal to extend the mining and reclamation operation beyond the boundaries authorized in the existing permit, the portion of the application for renewal of a valid permit which addresses any new land areas shall be subject to the full standards applicable to new permit applications under the Act, Parts 771, 778, 779, 780, 782, 783, 784, 785, 786, 787, 788, and 789 of this Subchapter, Subchapter J, and the State program.

(3) If the surface coal mining operations authorized under the original permit were not subject to the standards contained in Sections 510(b)(5)(A) and (B) of the Act and Section 785.19(e) of this Subchapter, because the permittee complies with the exceptions to Section 510(b)(5) of the Act, the portion of the application for renewal of the permit which addresses any new land areas previously identified in the reclamation plan submitted pursuant to Parts 780 or 784 of this Subchapter for the original permit shall not be subject to the standards contained in Sections 501(b)(5)(A) and (B) of the Act and Section 785.19(e) of this Subchapter.

(4) Before finally acting to grant the permit renewal, the regulatory authority shall require any additonal performance bond needed by the permittee to comply with the requirements of 30 CFR 791.14(a)(4) to be filed with the authority.

§ 791.13 Terms of renewals.

Any permit renewal shall be for a term not to exceed the maximum period of 5 years for the original permit established under Section 786.11 of this Subchapter.

§ 791.14 Approval or denial of renewals.

(a) The regulatory authority shall, upon the basis of a complete application for renewal and completion of all procedures required under this Part, issue a renewal of a permit, unless it is established and written findings by the regulatory authority are made that—

(1) The terms and conditions of the existing permit are not being satisfactorily met;

(2) The present surface coal mining and reclamation operation is not in compliance with the environmental protection standards under the Act, Subchapter K of this Chapter, and the regulatory program;

(3) The requested renewal substantially jeopardizes the operator's continuing responsibility on existing permit areas;

(4) The operator has not provided evidence that the performance bond in effect for such operation will continue in full force and effect for any renewal requested in such application, as well as any additional bond the regulatory authority might require pursuant to Subchapter J of this Chapter; or

(5) Any additional revised or updated information required by the regulatory authority has not been provided.

(b) In determining whether to approve or deny a renewal, the burden shall be on the opponents of renewal.

PART 792—TRANSFER, SALE OR ASSIGNMENT OF RIGHTS GRANTED UNDER PERMITS

Sec.
792.1 Scope.
792.2 Objectives.
792.11 General requirements.
792.12 Obtaining approval for transfer, assignment or sale of rights.
792.13 Requirements for new permits for persons succeeding to rights granted under a permit.

AUTHORITY: Secs. 101, 201, 501, 506, 509, 510, and 511, Pub. L. 95-87 (30 U.S.C. Secs. 1201, 1211, 1251, 1256, 1257, 1260, and 1261).

§ 792.1 Scope.

This Part establishes the minimum requirements for the Secretary's approval of regulatory program provisions for the transfer, sale or assignment of rights granted under permits issued under such programs and continuation of operations covered by such permits.

§ 792.2 Objectives.

The objective of this Part is to ensure that no person conducts surface coal mining and reclamation operations through the transfer, sale or assignment of rights granted under regulatory program permits without the prior approval of the regulatory authority. This is necessary to ensure that the environment is fully protected at all times.

§ 792.11 General requirements.

(a) No transfer, assignment, or sale of the rights granted under any permit issued pursuant to a regulatory program shall be made without the prior written approval of the regulatory authority, in accordance with this Part.

(b) Any person who has obtained the prior written approval of the regulatory authority under this Part for the transfer, sale or assignments of rights granted under permits issued to State programs, shall—

(1) If required by Sections 792.12(c)(2)(4), file a complete application with the regulatory authority for a new permit for the surface coal mining and reclamation operation covered by the existing permit within the time prescribed by Section 771.19(b)(3) of this Subchapter, and,

(2) Pending the decision of the regulatory authority on such application; conduct such operation in compliance with the Act, this chapter, the regulatory program, and the terms and conditions of the existing permit.

§ 792.12 Obtaining approval for transfer, assignment or sale of rights.

(a) Any person succeeding by transfer, assignment, or sale to the rights granted by a permit issued under this Subchapter shall, prior to the date of such transfer, assignment or sale—

(1) Obtain the bond coverage of the original permittee; and

(2) Provide the regulatory authority with an application for approval of such proposed transfer, assignment, or sale, including—

(i) The name and address of the existing permittee;

(ii) The name and address of the person, proposing to succeed by such transfer, assignment or sale and the name and address of that person's resident agent;

(iii) For surface mining activities, the same information as is required by 30 CFR 778.13, 778.14, 778.15, 778.16(c), 778.18 and 778.19 for appli-

cations for new permits for those activities; or

(iv) For underground mining activities, the same information as is required by 30 CFR 782.13, 782.14, 782.15, 782.16(c), 782.18 and 782.19 for applications for new permits for those activities.

(3) Obtain the written approval of the regulatory authority for transfer, assignment, or sale of rights, according to the criteria of paragraph (c) of this Section.

(b)(1) The person applying for the transfer, assignment or sale of rights granted by a permit shall advertise the filing of the application in a newspaper of general circulation in the locality of the operations involved, indicating the name and address of the applicant, the original permittee, the number and particular geographic location of the permit, and the address of which written comments may be sent under Subsection (b)(2).

(2) Any person including the head of any local, State or Federal government agency may submit written comments on the application for approval to the regulatory authority, within the time required by the regulations of the particular program.

(c) The regulatory authority may, upon the basis of the applicant's compliance with the requirements of paragraph (a) and (b) of this Section, grant written approval for the transfer, sale, or assignment of rights under a permit, if it first finds, in writing, that—

(1) The person seeking approval will conduct the operations covered by the permit in accordance with the criteria specified in 30 CFR 786.15 and 786.17 and the requirements of the Act, this Chapter and the regulatory program;

(2) The applicant for approval will not conduct the operation differently from those approved under the original permit, unless the applicant has applied for and received approval of a new permit from the regulatory authority, in accordance with the requirements of this Subchapter;

(3) The applicant has submitted a performance bond or other guarantee as required by Subchapter J and at least equivalent to the bond or other guarantee of the original permittee; and

(4) The applicant will continue to conduct the operations involved in full compliance with the terms and conditions of the original permit, unless and until it has obtained a new permit in accordance with this Subchapter.

§ 792.12 Requirements for new permits for persons succeeding to rights granted under a permit.

Any person conducting surface coal mining and reclamation operations by approval of the regulatory authority under this Part shall continue to conduct the operations involved according to the terms and conditions of the original permit, until that person has obtained a new or revised permit from the regulatory authority, in accordance with the requirements of this Subchapter.

SUBCHAPTER J—BOND AND INSURANCE REQUIREMENTS FOR COAL SURFACE MINING AND RECLAMATION OPERATIONS

PART 800—GENERAL REQUIREMENTS FOR BONDING OF SURFACE COAL MINING AND OPERATIONS UNDER STATE AND FEDERAL PROGRAMS

Sec.
800.1 Scope.
800.2 Objective.
800.11 Requirement to file a bond.
800.12 Requirement to file a certificate of liability insurance.
800.13 Regulatory authority responsibilities.

AUTHORITY: Secs. 102, 201(c), 501(b), 507, 509, and 519, Pub. L. 95-87, 91 Stat. 448, 449, 468, 474, 477, 479, and 501 (30 U.S.C. 1201, 1211, 1251, 1257, 1259, and 1269).

§ 800.1 Scope.

This Part sets forth the minimum requirements for bonding and insuring surface coal mining and reclamation operations on non-Indian and non-Federal lands under a State program or a Federal program adopted in a State.

§ 800.2 Objective.

The objective of this Part is to set forth the minimum requirements and responsibilities for filing bonds and insurance in accordance with the Act.

§ 800.11 Requirement to file a bond.

(a) After a coal mining and reclamation permit application has been approved but before a permit is issued, the applicant shall file with the regulatory authority a bond for performance payable to the regulatory authority. The performance bond will be conditioned upon the faithful performance of all the requirements of the Act, the regulations of this Chapter, or a State or Federal program, the rules and regulations issued under a State or Federal program and the provisions of its permit. The amount, duration, form, conditions and terms of the performance bond shall conform to Parts 805 and 806 of this Subchapter.

(b) The initial bond shall cover liability for the area of land to be affected within the first year of conducting surface coal mining and reclamation operations under the permit. Incremental bonds for 1-year periods within the term of the permit shall be filed with the regulatory authority on or before 30 days before beginning additional surface coal mining and reclamation operations.

(c) The amount, duration, form, conditions and terms of the performance bond shall conform to 30 CFR 805 and 806.

§ 800.12 Requirement to file a certificate of liability insurance.

(a) Each applicant for a permit shall submit to the regulatory authority, as part of the permit application, a certificate issued by an insurance company authorized to do business in the United States. The certificate shall certify that the applicant has a public liability insurance policy in force for the surface mining and reclamation operations for which the permit is sought. The amount, duration, form, conditions and terms of such insurance shall conform to 30 CFR 806.

(b) The applicant may, instead of purchasing liability insurance, submit evidence that it satisfies applicable State or Federal self-insurance requirements and that self-insurance for liability is otherwise consistent with § 806.14.

§ 800.13 Regulatory authority responsibilities.

(a) The regulatory authority shall prescribe and furnish the form for filing a performance bond.

(b) The regulatory authority shall prescribe terms and conditions for bonds and insurance by regulation. The regulatory authority shall meet, at a minimum, those provisions of 30 CFR 805 and 806.

(c) The regulatory authority shall determine the amount of the bond required for each part of the permit area to be bonded, including adjustments to the initial amount from time to time as affected land acreages are increased or decreased or where the cost of future reclamation changes, according to the minimum requirements of § 805.11(a).

(d) The regulatory authority may accept the bond of the applicant in lieu of a surety or collateral bond if the applicant meets the requirements of § 806.11(b).

(e) The regulatory authority shall release the permittee from his bond and insurance requirements consistent with §§ 807.11, 807.12, and 807.13(a).

(f) The regulatory authority shall cause all or part of a bond to be forfeited consistent with 30 CFR 808.

PART 805—AMOUNT AND DURATION OF PERFORMANCE BOND

Sec.
805.1 Scope.
805.11 Determination of bond amount.
805.12 Minimum amount.
805.13 Period of liability.
805.14 Adjustment of amount.

AUTHORITY: Secs. 102, 201(c), 501(b), 509, and 515, Pub. L. 95-87, 91 Stat. 448, 449, 468, 479, and 491 (30 U.S.C. 1201, 1211, 1251, 1259, and 1265).

§ 805.1 Scope.

This Part sets forth the minimum requirements for determining the amounts of performance bonds and the time periods of liability for surface coal mining and reclamation operations.

§ 805.11 Determination of bond amount.

(a) The standard applied by the regulatory authority in determining the amount shall be the estimated actual cost to the regulatory authority if it had to perform the reclamation, restoration and abatement work required, under the Act, the regulations of this Chapter, or a State or Federal program, all regulations promulgated under that State or Federal program and the provisions of the permit.

(b) The amount of a bond required for each permit area, or increments within these areas, shall be determined by the regulatory authority and based upon but not limited to the following:

(1) The estimated cost to the regulatory authority of completing the reclamation plan, the performance standards in 30 CFR 810-828 and the approved permit;

(2) In determining the estimated cost for underground coal mining operations, the following criteria shall be used in addition to those in § 805.11(b)(1):

(i) Estimated cost of replacement of ponds and stream linings; and

(ii) Estimated cost of repair to structures and facilities within the permit area based on history of damage, incidence and repair costs within the region;

(3) The additional cost to the regulatory authority which may arise from applicable public contracting requirements or the requirement to bring personnel and equipment to the permit area after abandonment by the permittee;

(4) All costs necessary, expedient and incident to the satisfactory completion of the requirements of the permit and the performance standards in Subchapter K of this Chapter;

(5) A factor based on cost increases during the preceding 5 years for the types of activities or costs associated with the reclamation to be performed; and

(6) Such other cost information that may be acquired by the regulatory authority.

§ 805.12 Minimum amount.

(a) The amount of the bond for surface coal mining and reclamation operations shall, at a minimum, be sufficient to assure performance of all the requirements of the Act, the performance standards of 30 CFR 810-828 or a State or Federal program, all regulations under a State or Federal program and the provisions of the permit if the work had to be performed by the regulatory authority in the event of forfeiture.

(b) The bond for surface coal mining and reclamation operation shall not be less than $10,000 for the entire area under one permit.

§ 805.13 Period of liability.

(a) *All coal mining operations.* At a minimum, liability under a bond shall continue until all reclamation requirements of the Act, this Chapter and the provisions of the permit have been met.

(b) *Surface coal mining activities.* In addition to the requirement of paragraph (a) of this section, liability under the bond for revegetation shall continue for a period of 5 full years after the last year of augmented seeding, fertilizing, irrigation, or other work required under the performance standards of 30 CFR 810-828 which has achieved compliance with the standards for successful revegetation under 30 CFR 816.55(f), where the average annual precipitation is more than 26 inches or for 10 years where the average annual precipitation is 26 inches or less.

(1) If the regulatory authority approves a long-term intensive agricultural postmining land use in accord with the performance standards of 30 CFR 810-828, the applicable 5- or 10-year period of liability shall commence at the date of initial planting for such long-term intensive agricultural land use.

(2) The regulatory authority may, upon a written finding approving a long-term intensive agricultural land use, grant an exception to the revegetation requirements of 30 CFR 816, but shall not grant exception to the period of liability in § 805.13 (a) or (b).

(c) *Underground coal mining activities.* The period of liability for an underground mine shall continue for a sufficient period to ensure that the requirements of the reclamation plan and approved permit have been successfully met. The regulatory authority shall determine the duration of bond liability based on—

(1) The life of the mine,

(2) The period of time to install any facilities or structures to meet the requirements of the approved permit; and

(3) A period of time to ensure the success of any facilities or structures installed to meet the requirements of the approved permit.

§ 805.14 Adjustment of amount.

(a) The amount of the bond shall be adjusted by the regulatory authority as surface or underground affected area under the permit is increased or decreased, methods of mining operation change, standards of reclamation change, or when the cost of future reclamation changes. The regulatory authority shall notify the permittee of any proposed bond adjustment and provide the opportunity for an informal conference. The regulatory authority shall review each outstanding bond at the time that permit reviews are conducted under 30 CFR 790.3, and re-evaluate those bonds in accordance with the standards in § 805.11.

(b) A permittee may request reduction of the required bond amount upon production of evidence submitted to the regulatory authority proving that the permittee's method of operation or other circumstances will reduce the maximum estimated cost to the regulatory authority to complete the reclamation responsibilities and therefore warrant a reduction of the bond amount.

(c) Any person with a valid legal interest which may be affected by adjustment of the bond or the continued operation of surface coal mining and reclamation operation currently under bond may petition the regulatory authority to alter the bond amount by the submission of evidence that the bond may be insufficient and that review of the bond is warranted.

(d) Upon receipt of a request for reduction or petition for adjustment, the regulatory authority shall hold a hearing, after notice in a newspaper serving the locale of the bonded area for which an adjustment is sought, providing the permittee and persons whose interests are or may be adversely affected an opportunity to comment on the request. The regulatory authority shall notify the permittee and participants at the hearing of its decision within 30 days from the close of the hearing.

(e) The notice shall be in writing, stating the reasons for the decision and informing the permittee or any person whose interests may be adversely affected by the decision and who participated in the hearing of any rights of appeal.

PART 806—FORM, CONDITIONS AND TERMS OF PERFORMANCE BONDS AND LIABILITY INSURANCE

Sec.
806.1 Scope.
806.11 Form of the performance bond.
806.12 Terms and conditions of the bond.
806.13 Replacement of bonds.
806.14 Terms and conditions for liability insurance.

AUTHORITY: Secs. 102, 201(c), 501(b), 507(f) and 509, Pub. L. 95-87, 91 Stat. 448, 449, 468, 477 and 479 (30 U.S.C. 1202, 1211, 1251, 1257, and 1259).

§ 806.1 Scope.

This Part establishes the minimum standards for the form of the bond for surface coal mining and reclamation operations, and the terms and conditions applicable to bonds and liability insurance.

§ 806.11 Form of the performance bond.

(a) The form for the performance bond shall be prescribed by the regulatory authority. The regulatory authority shall offer either of the following forms:

(1) An indemnity agreement executed by the applicant and a corporate surety licensed to do business in the State where the surface or underground coal mining operation is located and payable to the regulatory authority; or

(2) An indemnity agreement executed by the applicant and payable to the regulatory authority pledging cash deposits, negotiable bonds of the United States, State or municipalities, or negotiable certificates of deposit of any bank organized or transacting business in the United States, if the applicant so chooses.

(b) *Self-bond instead of surety or collateral bond.* The regulatory authority may accept an indemnity agreement from the applicant payable to the regulatory authority without separate surety guarantee or pledge of specific collateral, considering the following conditions:

(1) The applicant shall designate a suitable agent to receive service of process.

(2) The applicant shall have demonstrated a history of compliance with the Act, the regulations of this Chapter, or a State or Federal program, rules and regulations promulgated thereunder and the conditions of all permits. For purposes of this subparagraph, an applicant shall be unable to demonstrate a history of compliance if the applicant controls or has controlled surface coal mining and reclamation operations that—

(i) Have forfeited a performance bond which was posted to insure reclamation of a coal surface mining and reclamation operation;

(ii) Have notices of violation or orders of cessation that have not been abated;

(iii) Have demonstrated a pattern of willful violations of the Act of such a nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the act as described in § 843.13 of this Chapter; or

(iv) Are delinquent in payment of either the reclamation fee required under Subchapter R of this Chapter or a civil penalty assessment under 30 CFR, if a State has adopted it as part of its State program, or if the regulatory authority is the Office.

(3) The applicant has a net worth, certified by a certified public accountant, of no less than twice the total amount of bond obligations on all permits issued to the applicant.

(4)(i) The indemnity agreement shall be executed by the applicant and by—

(A) If the applicant is a publicly held corporation, its principal executive officer or officers, its principal financial officer, its controller or principal accounting officer and by at least the majority of the board of directors or persons performing similar functions;

(B) If the applicant is a foreign person, the indemnity agreement shall also be signed by its authorized representative in the United States, if any;

(C) Its parent corporation and every parent of which it is a subsidiary, whether first-tier, second-tier, or further removed, if any;

(D) If the applicant is a partnership, all of its general partners and their parents;

(E) If the applicant is a married individual, the applicant's spouse; and

(F) If the applicant is a closely held corporation, all of its principal investors, its principal executive officer or officers, its principal financial officer, its controller or principal accounting officer and by at least the majority of the board of directors or persons performing similar functions.

(ii) The name of each person who signs the indemnity agreement shall be typed or printed beneath the signature. Any person who occupies more than one of the specified positions shall indicate each capacity in which he or she signs the indemnity agreement.

(iii) The indemnity agreement shall be a binding obligation, jointly and severally, on all who execute it.

(iv) For purposes of paragraph (4)(b) of this section, principal investor means anyone with a 10 percent or more beneficial ownership interest, directly or indirectly, in the applicant.

(v) For the purposes of paragraph (4), parent means owner, direct or indirect, of a 10 percent or more beneficial interest in the applicant or any corporation, partnership or individual which has a 10 percent or more beneficial ownership in the applicant.

(c) The Secretary may approve, as part of a State or Federal program, an alternative bonding system, if it will achieve the following objectives and purposes of the bonding program:

(1) The alternative must assure that the regulatory authority will have available sufficient money to complete the reclamation provisions for all permit areas which may be in default at any time; and

(2) The alternative must provide a substantial economic incentive for the permittee to comply with all reclamation provisions.

§ 806.12 Terms and conditions of the bond.

(a) The bond shall be in an amount determined by the regulatory authority as provided in 30 CFR 805.11 and 805.12.

(b) The bond shall be payable to the regulatory authority.

(c) The bond shall be conditioned upon faithful performance of all of the requirements of the Act, or State law adopted pursuant to a State regulatory program, the rules and regulations promulgated thereunder and the conditions of the permit and shall cover the permit area.

(d) The duration of the bond shall be for the time period provided in 30 CFR 805.13.

(e) Surety bonds shall be subject to the following conditions:

(1) The regulatory authority shall not accept a surety company's bond unless it is agreed that the bond shall not be cancellable by the surety at any time during the period of liability, for any reason including non-payment of premium or bankruptcy of the permittee.

(2) The regulatory authority shall not accept a surety company's bond in excess of the company's maximum single obligation as provided by State law in the State where the permit area is located, unless the surety company satisfies State law for exceeding such limit. In States where no maximum single obligation limit is established by State law, the regulatory authority shall not accept surety bonds in excess of 10 percent of the surety company's capital surplus account as shown on a balance sheet certified by a certified public accountant.

(3) The regulatory authority shall not accept surety bonds from a surety company for any permittee on all permits in excess of three times the company's maximum single obligation as provided by State law or, in the absence of State law, as provided in paragraph (e)(2) of this section.

(4) The regulatory authority may provide in the bond that the amount shall be confessed to judgment upon forfeiture if such procedure is authorized by State law.

(5) The bond shall provide that the surety and the permittee shall be jointly and severally liable.

(f) Collateral bonds shall be subject to the following conditions:

(1) The regulatory authority shall obtain possession of and keep in custody all collateral pledged by the applicant until authorized for release or replacement as provided in this Subchapter.

(2) The regulatory authority shall value collateral at its current market value, not face value.

(3) The regulatory authority shall require that certificates of deposit be assigned to the regulatory authority, in writing, and upon the books of the bank issuing such certificates.

(4) The regulatory authority shall not accept an individual certificate for a denomination in excess of $40,000.

(5) The regulatory authority shall require the banks issuing such certificates to waive all rights of setoff or liens which it has or might have against such certificates.

(6) The regulatory authority shall only accept automatically renewable certificates of deposit.

(7) The regulatory authority shall require the applicant to deposit sufficient amounts of certificates of deposit to assure that the regulatory authority will be able to liquidate such certificates prior to maturity, upon forfeiture, for the amount of the bond required by the provisions of this Subchapter.

§ 806.13 Replacement of bonds.

(a) The regulatory authority may allow permittees to replace existing surety or collateral bonds with other surety or collateral bonds, provided, however, that the liability which has accrued against the permittee on the permit area shall be transferred to such replacement bonds.

(b) The regulatory authority shall not allow permittees to replace existing surety or collateral bonds with a self-bond provided in 30 CFR 806.11(b).

(c) The regulatory authority shall not release existing bonds until the permittee has submitted acceptable and approved replacement bonds. A replacement of bonds pursuant to this section shall not constitute a release of bond under 30 CFR 807.

§ 806.14 Terms and conditions for liability insurance.

(a) The regulatory authority shall require the applicant to submit at the time of permit application, a certificate certifying that the applicant has a public liability insurance policy in force for the surface coal mining and reclamation operation for which the permit is sought. The certificate shall provide for personal injury and property damage protection in an amount adequate to compensate all persons injured or property damaged as a result of surface coal mining and reclamation operations, including use of explosives and damage to water wells, and entitled to compensation under the applicable provisions of State law. Minimum insurance coverage for personal injury shall be $300,000 for each injury and $500,000 for each accident. Minimum insurance coverage for property damage shall be $300,000 per accident and $500,000 aggregate.

(b) The policy shall be maintained in full force during the life of the permit or any renewal or extension thereof, including completion of all reclamation and restoration operations under this Chapter.

(c) The policy shall include a rider requiring that the insuror notify the regulatory authority whenever substantive changes are made in the policy, including any termination or failure to renew.

(d) The regulatory authority may accept from the applicant, in lieu of a certificate for a public liability insurance policy, satisfactory evidence from the applicant that it satisfies applicable State self-insurance requirements and the requirements of this section.

PART 807—PROCEDURES, CRITERIA AND SCHEDULE FOR RELEASE OF PERFORMANCE BOND

Sec.
807.1 Scope.
807.11 Procedures for seeking release of bond.
807.12 Criteria for release of bond.
807.13 Schedule for release of bond.

AUTHORITY: Secs. 102, 201(c), 501(b), 507(b)(16), 515(b)(8), (10), and (20), and 519, Pub. L. 95-87, 91 Stat. 440, 449, 468, 477, 488, 489, 491, and 501 (30 U.S.C. 1202, 1211, 1251, 1257, 1265, and 1269)

§ 807.1 Scope.

This Part sets forth the procedures and criteria for release of performance bonds for both surface and underground coal mining activities. This includes the filing, notice and hearing requirements, and the standards by which the application for release shall be evaluated.

§ 807.11 Procedures for seeking release of bond.

(a) The permittee may file a request for release of all or part of the performance bond(s) on deposit with the regulatory authority after reclamation and restoration operations under this Subchapter and Subchapter K of this Chapter have been completed.

(1) Bond release applications may only be filed at times or seasons that allow the regulatory authority to properly evaluate the reclamation alleged to have been completed. The times or seasons appropriate for the evaluation of certain types of reclamation shall be identified in the reclamation plan and approved by the regulatory authority.

(2) The bond release application shall include copies of letters sent to adjoining property owners, surface owners, local governmental bodies, planning agencies, and sewage and water treatment facilities or water companies in the locality of the mine notifying them of his intention to seek release from the bond. These letters shall be sent before the permittee files a request for release of bond.

(b) Within 30 days after filing a request for bond release, the permittee shall advertise the request for release in a newspaper of general circulation in the city or town nearest the mine. A proof of publication of the advertisement shall be submitted to the regulatory authority. The advertisement shall—

(1) Be placed in the newspaper at least once a week for four (4) consecutive weeks;

(2) Show the name of the permittee, including the number and date of the permit;

(3) Show the precise location and the number of acres of the land affected;

(4) Show the total amount of bond in effect and the amount for which release is sought;

(5) Summarize the reclamation and restoration work done, including any back stowing or mine sealing, if applicable, and give the dates of completion;

(6) Describe the reclamation and restoration results achieved as they relate to the approved mining and reclamation plan; and

(7) State that written comments may be submitted to the office of the regulatory authority and provide the address of the office.

(c) The regulatory authority shall inspect and evaluate the reclamation work involved within 30 days after receiving a copy of the newspaper advertisement, or as soon thereafter as weather conditions permit.

(1) The surface owner, agent, or lessee may participate with the regulatory authority in making the bond release inspection.

(2) The regulatory authority shall consider, when making its inspection and evaluation—

(i) Whether the permittee has met the criteria for release of the bond under § 807.12 of this Part;

(ii) The degree of difficulty in completing any remaining reclamation;

(iii) Whether pollution of surface and subsurface water is occurring;

(iv) The probability of future pollution or the continuance of any present pollution of surface and subsurface water; and

(v) The estimated cost of abating any pollution.

(d) If no public hearing is requested under paragraph (e) of this section and the regulatory authority disapproves the application for release of the bond or any portion of it, the regulatory authority shall notify the permittee, in writing, stating the reasons for disapproval consistent with paragraph (c) of this section.

(1) The notice shall recommend corrective actions necessary to secure release of the bond. The notice shall also provide the permittee with an opportunity for a public hearing before the regulatory authority.

(i) If the permittee requests a public hearing, the regulatory authority shall publish notice in the FEDERAL REGISTER or the official State publication, whichever is applicable. The notice shall advertise the date, time and location in the newspaper of general circulation in the locality of the area under bond for which release is sought.

(ii) The hearing shall be held within thirty (30) days of the request in the town or city nearest the area under bond for which release is proposed.

(iii) The hearing shall be legislative in type and conform to the applicable requirements of 5 U.S.C. Section 553 if the regulatory authority is the Office, or the applicable requirements of State law governing administrative hearings if the regulatory authority is the State.

(iv) The regulatory authority shall conduct the hearing and allow all participants an opportunity to comment on the disapproval.

(2) If a public hearing is held at the request of the permittee following disapproval of its request, the permittee shall have the burden of presenting a preponderance of evidence to persuade the regulatory authority that its decision disapproving the request cannot be supported by the reasons given.

(e) Written objections to the proposed bond release and a request for a public hearing may be filed with the regulatory authority by affected persons within thirty (30) days of the last advertisement of the bond release. Affected persons are—

(1) Any person with a valid legal interest which might be adversely affected by bond release; and

(2) The responsible officer or head of any Federal, State or local government agency which—

(i) Has jurisdiction by law or special expertise with respect to any environmental, social or economic impact involved; or

(ii) Is authorized to develop and enforce environmental standards with respect to surface or underground coal mining.

(f) If written objections are filed and a public hearing is requested the regulatory authority shall schedule a public hearing. The regulatory authority shall:

(i) Inform the permittee, local government and the objecting party of the time and place of the hearing;

(ii) Publish notice in the FEDERAL REGISTER or the official State publication and advertise the date, time, and location in a newspaper of general circulation in the locality of the mine twice a week for two (2) consecutive weeks before the hearing; and

(iii) Hold the public hearing within thirty (30) days of the request in the town or city nearest to the area under bond for which release is sought or the State capital, at the option of the objector.

(2) The regulatory authority may subpoena witnesses, and written and printed materials; and compel attendance of witnesses and production of the materials for a hearing. A verbatim record of each public hearing shall be made and the transcript made available on the motion of any party or by order of the regulatory authority.

(3) The hearing, if requested, shall otherwise conform to the applicable requirements of 5 U.S.C. Section 554 if the regulatory authority is the Office, or to the applicable requirements of the State law governing administrative hearings if the regulatory authority is the State.

(g) The applicant and any of the objecting parties may agree to an informal conference to resolve such written objections instead of the hearing under paragraph (e) of this section. The informal conference shall be held in the locality of the permit area for which bond release is sought. The decision to conduct an informal conference shall not prejudice the right of any objecting party who has not agreed to the informal conference instead of a hearing to demand a formal hearing under paragraph (f) of this section

(1) Notice of the informal conference shall be published in the FEDERAL REGISTER or the official State publication, and a newspaper of general circulation in the locality of the scheduled conference at least two weeks before the conference date.

(2) The informal conference shall be held 30 days from the date of notice.

(3) An electronic or stenographic record shall be made of the conference and the record maintained for access by the parties until final release of the bond unless recording is waived by the parties.

(h)(1) The regulatory authority shall notify the permittee and any other interested parties in writing of its decision to release or not to release all or part of the performance bond or deposit within sixty (60) days from the filing of the request, if no public hearing or conference has been held.

(2) If there has been a public hearing or conference held, the notification shall be made to all interested parties within thirty days after conclusion of the conference.

(3) A notice of disapproval shall state reasons for the disapproval, recommend corrective actions necessary to secure the release and notify the applicant of his right to appeal the decision of the regulatory authority.

(4) A notice of approval shall state the reasons for approval and notify interested parties of their right to appeal the decision of the regulatory authority.

(i) The regulatory authority shall notify the town or city nearest to and the county in which the operation is located by certified mail at least thirty (30) days prior to release of all or part of the bond.

§ 807.12 Criteria for release of bond.

(a) The regulatory authority shall not release the bond or any part of it under § 807.13 until it finds that the permittee has met the applicable performance standards under 30 CFR 810–827 for the surface coal mining and reclamation operation, the requirements of its permit and the approved State program.

(b) The regulatory authority shall, at all times until final completion of the permittee's obligations under paragraph (a) of this section and final release of all bonding, retain at least $10,000 in bond amount, and such additional amounts determined by the regulatory authority to be necessary to—

(1) Cover the cost of uncompleted reclamation operations; and

(2) Other uncompleted requirements of the permit, the Act or this Chapter.

§ 807.13 Schedule for release of bond.

The regulatory authority may release the bond or deposit for the area of land affected within each year of the permit term according to the following schedule:

(a) Sixty (60) percent of the bond may be released when the permittee completes backfilling, topsoil replacement, regrading and drainage control of the bonded area in accordance with the approved mining and reclamation plan.

(b) After revegetation has been established according to the approved mining and reclamation plan and the standards for measuring the success of revegetation are met, the regulatory authority may release an additional twenty-five (25) percent of the bond. No part of this remaining portion of bond may be released:

(1) As long as the lands are contributing suspended solids to stream flow

or runoff outside the permit area in excess of the requirements in section 515(b)(10) of the Act and 30 CFR 816.49(b);

(2) Until soil productivity on prime farmlands is returned to equivalent levels of yield for non-mined prime farmland in the surrounding area under equivalent management practices as determined from the soil survey performed under section 507(b)(16) of the Act; and

(3) Unless satisfactory provision in the approved mining and reclamation plan is made for the sound future maintenance by the operator or landowner of any permanent impoundment, which provision is also authorized by the regulatory authority.

(c) The regulatory authority shall not partially release the bond as provided in this section if the remaining bond amount will fall below $10,000.

(d) The regulatory authority shall release the remainder of the bond when the permittee has successfully completed all surface coal mining and reclamation operations in accordance with the approved mining and reclamation plan, the requirements of this Subchapter and 30 CFR parts 810-827 and the applicable liability period under paragraph (a) of this section has expired.

PART 808—PERFORMANCE BOND FORFEITURE CRITERIA AND PROCEDURES

Sec.
808.1 Scope.
808.11 General.
808.12 Procedures.
808.13 Criteria for forfeiture.
808.14 Determination of forfeiture amount.

AUTHORITY: Secs. 102, 201(c), 501(b), 509(a), and 519, Pub. L. 95-87, 91 Stat. 448, 449, 468, 480, and 501 (30 U.S.C. 1202, 1211, 1251, 1259, and 1269).

§ 808.1 Scope.

This Part sets forth the criteria and procedures applicable whenever the regulatory authority initiates a proceeding for the forfeiture of a bond or any part of a bond as a result of the permittee's failure to meet the conditions upon the bond.

§ 808.11 General.

(a) The regulatory authority shall forfeit all or part of a bond for any permit which—

(1) Has not been mined, reclaimed and restored consistent with applicable performance standards of 30 CFR 810-827, the approved reclamation plan, and requirements of the permit; or

(2) Is in violation of any other condition upon the bond.

(b) The regulatory authority may withhold forfeiture if the permittee agrees to a compliance schedule to comply with the violations of the permit or bond conditions.

§ 808.12 Procedures.

(a) In the event forfeiture of the bond is required by § 808.11, the regulatory authority shall—

(1) Send written notification to the permittee, and the surety on the bond, if applicable, of the regulatory authority's determination to forfeit all or part of the bond and all reasons for such forfeiture, including a finding of the amount to be forfeited;

(2) Advise the permittee of any rights of appeal that may be available for that determination under local law if the regulatory authority is the State, or under Federal law, if the regulatory authority is the Office; and

(3) If an appeal is not filed within a time established by the regulatory authority or is unsuccessful, proceed in an action for collection on the bond as provided by applicable laws for the collection of defaulted bonds or other debts, consistent with this section for the amount of the estimated actual costs to the regulatory authority to carry out the performance standards and reclamation requirements for a surface or underground coal mining operation; and

(4) If an appeal is filed, defend the action.

(b) The written determination to forfeit all or part of the bond, including the reasons for forfeiture and the amount to be forfeited, shall be a final decision by the regulatory authority.

(c) The regulatory authority may forfeit any or all bond deposited for an entire permit area in order to satisfy the obligations of section 808.11 and Section 808.14.

§ 808.13 Criteria for forfeiture.

(a) A bond shall be forfeited if the regulatory authority finds that—

(1) The permittee has violated any of the terms or conditions of the bond; or

(2) The permittee has failed to conduct the surface mining and relcamation operation in accordance with the Act, the conditions of the permit within the time periods required by the approved reclamation plan, the State or Federal program, the regulations issued under a State or Federal program or required by the approved reclamation plan; or

(3) The permit for the area under bond has been revoked.

(b) A bond may be forfeited if the regulatory authority finds that—

(1) The permittee has become insolvent, failed in business, filed a petition in bankruptcy or for a receiver, or had a petition in bankruptcy or for a receiver filed against it in any court; or

(2) A creditor of the permittee has attached or executed a judgment against the permittee's equipment, materials, facilities at the permit area or on the collateral pledged to the regulatory authority; and

(3) The permittee cannot demonstrate or prove that it will be able to continue to operate in compliance with the Act.

§ 808.14 Determination of forfeiture amount.

The regulatory authority shall either—

(a) Determine the amount of the bond to be forfeited on the basis of the estimated actal cost to the regulatory authority or its contractor to complete the reclamation plan and other regulatory requirements in accordance with the Act, the regulations of this Chapter, a State or Federal program, and the rules and regulations issued under a State or Federal program, and the requirements of the permit; or

(b) Forfeit the entire amount of the bond for which liability is outstanding, deposit the proceeds thereof in an interest-bearing escrow account for use in the payment of all costs and administrative expenses associated with the completion of reclamation by the authority. Following completion of reclamation by the regulatory authority, the principal balance and accrued interest remaining in the account shall be returned.

PART 809—BONDING AND INSURANCE REQUIREMENTS FOR ANTHRACITE SURFACE COAL MINING AND RECLAMATION OPERATIONS

Sec.
809.1 Scope.
809.2 Objective.
809.3 Responsibilities.
809.11 Applicability.
809.12 Requirements.

AUTHORITY: Sections 102, 201(c), 501(b), 507(f), 507(b)(16), 509, 515(b)(8) and (10), 519 and 529, Pub. L. 95-87, 91 Stat. 445, 449, 468, 477, 479, 488, 489, 501 and 514 (30 U.S.C. 1202, 1211, 1251, 1257, 1259, 1265, 1269 and 1279).

§ 809.1 Scope.

This Part sets forth the applicability and general requirements for bonding and insuring anthracite surface coal mining and reclamation operations where such operations were regulated by environmental protection standards of the State in which they are located on or before August 2, 1977.

§ 809.2 Objective.

The objective of this Part is to provide minimum standards for bonds and insurance for anthracite surface

coal mining and reclamation operations under Section 529(a) of the Act.

§ 809.3 Responsibilities.

All persons seeking to engage in or engaging in anthracite surface coal mining and reclamation operations subject to Section 785.11 and Part 820 of this Chapter and every regulatory authority regulating anthracite surface coal mining and reclamation operations shall comply with the bonding and insurance requirements of this Part.

§ 809.11 Applicability.

This Part applies to any person seeking to engage in or engaging in anthracite surface coal mining and reclamation operations in Pennsylvania.

§ 809.12 Requirements.

(a) All of the provisions of this Subchapter shall apply to bonding and insuring anthracite surface coal mining and reclamation operations in Pennsylvania, provided that:

(1) Specified bond limits shall be determined by the regulatory authority in accordance with applicable provisions of Pennsylvania law, rules and regulations promulgated thereunder, and implementing policies of the Department of Environmental Resources, State of Pennsylvania.

(2) The period of liability for responsibility under each bond shall be established for those operations in accordance with applicable laws of the State of Pennsylvania, rules and regulations promulgated thereunder, and implementing policies of Pennsylvania's Department of Environmental Resources.

(b) Upon amendment of the Pennsylvania permanent regulatory program with respect to specified bond limits and period of revegetation responsibility for anthracite surface coal mining and reclamation operations, any person engaging in or seeking to engage in those operations shall comply with additional regulations the Secretary may issue as are necessary to meet the purposes of the Act.

(c) Nothing in this Part shall exempt anthracite surface coal mining and reclamation operations from the requirements under this chapter, except as set forth in Section 785.11 and Part 820 of this Chapter.

SUBCHAPTER K—PERMANENT PROGRAM PERFORMANCE STANDARDS

PART 810—PERMANENT PROGRAM PERFORMANCE STANDARDS—GENERAL PROVISIONS

Sec.
810.1 Scope.
810.2 Objectives.
810.3 Authority.
810.4 Responsibility.

AUTHORITY: Secs. 102, 201, 501(b), 503, 504, 512, 515, 516 and 517 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 471, 483, 486, 495, and 498 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1262, 1265, 1266, and 1267).

§ 810.1 Scope.

(a) This Subchapter sets forth the minimum performance standards to be implemented under a regulatory program before it will be approved by the Secretary; and

(b) This Subchapter sets forth requirements to be used in developing regulatory programs for coal exploration operations and surface coal mining and reclamation operations.

§ 810.2 Objectives.

The objective of this Subchapter is to ensure that coal exploration operations and surface coal mining and reclamation operations are conducted in a manner which is compatible with the environmental, social, and esthetic needs of the Nation. This requires—

(a) Protection of the health, safety, and general welfare of mine workers and the public;

(b) Maximum use and conservation of the solid fuel resource being recovered so that reaffecting the land through future surface coal mining operations can be minimized;

(c) Prompt reclamation of all disturbed areas to conditions that are capable of supporting the premining land uses or higher or better land uses;

(d) Reclamation of land disturbed by surface coal mining operations as contemporaneously as practicable with mining operations;

(e) Minimizing, to the extent possible using the best technology currently available, of disturbances and adverse impacts on fish, wildlife and other related environmental values, and enhancement of such resources where practicable;

(f) Revegetation which achieves a prompt vegetative cover and recovery of productivity levels compatible with approved land uses;

(g) Minimum disturbance to the prevailing hydrologic balance at the mine-site and in associated off-site areas, and to the quality and quantity of water in surface and groundwater systems;

(h) Protection of fragile and historic lands where surface coal mining operations could result in significant damage to important historic, cultural, scientific, or esthetic values; and

(i) Confinement of surface coal mining and reclamation operations and spoil disposal areas within the permit area.

§ 810.3 Authority.

The Secretary shall promulgate minimum coal exploration and surface mining and reclamation operations performance standards applicable under a State or Federal program.

§ 810.4 Responsibility.

(a) Under the general direction of the Assistant Secretary, Energy and Minerals, the Director shall ensure that performance standards at least as stringent as the standards established by the Secretary are implemented and enforced under every State and Federal program.

(b) Each regulatory authority under an approved State program is responsible for implementing and enforcing performance standards which are at least as stringent as the standards in this Subchapter.

(c) Each person conducting surface coal mining and reclamation operations is responsible for complying with performance standards which are at least as stringent as the standards in this Subchapter.

PART 811—PERMANENT PROGRAM PERFORMANCE STANDARDS—APPLICABILITY TO STATE AND FEDERAL PROGRAMS

Sec.
811.1 Scope.
811.2 Objective.
811.10 Applicability to State programs.
811.11 Applicability to Federal Programs.

AUTHORITY: Secs. 102, 201, 501(b), 503, 504, 505, 512, 515, 516 and 517 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 471, 473, 483, 486, 495, and 498 (30 USC 1202, 1211, 1251, 1253, 1254, 1255, 1262, 1265, 1266, and 1267).

§ 811.1 Scope.

This Part sets forth how the performance standards of this Subchapter are to be used in the development of every regulatory program.

§ 811.2 Objective.

The objective of this Part is to explain the manner in which the performance standards contained in this Subchapter are to be used as the basis for developing the performance standards applicable under each regulatory program.

§ 811.10 Applicability to State programs.

To be eligible for approval by the Secretary, a State program must contain performance standards at least as stringent as the performance standards of this Subchapter and must comply with all the requirements of 30 CFR 730-734.

§ 811.11 Applicability to Federal programs.

(a) If a State fails to submit a program for approval or to implement or maintain an approved State program, the Secretary shall implement a Federal program which shall include performance standards at least as strin-

gent as the minimum performance standards of this Subchapter.

(b) A Federal program for a State shall take into consideration the nature of that State's terrain, climate, biological, chemical, and other relevant physical conditions and shall be promulgated in accordance with Part 736 of this Title.

(c) If a Federal program is implemented for a State which has existing statutes or regulations that interfere with the achievement of the purposes and requirements of the Act and the Federal program, those statutes or regulations shall, so far as they interfere with the achievement of the purposes and requirements of the Act and Federal program, be preempted and superceded by the Federal program. The Secretary shall set forth those State statutes or regulations in accordance with 30 CFR 736.23.

PART 812—PERMANENT PROGRAM PERFORMANCE STANDARDS—INDEX

Sec.
812.1 Scope.
812.2 Objectives.
812.11 Parts containing performance standards.
812.12 Alphabetic index to performance standards.

AUTHORITY: Secs. 102, 201, 501(b), 515 and 516 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 486, and 495 (30 USC 1202, 1211, 1251, 1265 and 1266).

§ 812.1 Scope.

This Part contains an index to the minimum performance standards of this Subchapter.

§ 812.2 Objectives.

The objectives of this Part are to—

(a) Assist any person who conducts or intends to conduct coal exploration or surface coal mining and reclamation operations in determining which performance standards apply to the operations.

(b) Improve the understanding of these minimum performance standards to increase compliance; and

(c) Provide interested parties with a simple reference system to this Subchapter.

§ 812.11 Parts containing performance standards.

(a) Coal exploration—Part 815
(b) General extraction methods:
(1) Surface—Part 816
(2) Underground—Part 817
(c) Geographical locations:
(1) Alaska—Part 821
(2) Alluvial valley floors—Part 822
(3) Special bituminous coal mines in Wyoming—Part 825
(d) Chemical properties of coal: Anthracite mines—Part 820
(e) Combination of general extraction methods: Concurrent surface and underground—Part 818
(f) Special surface mining methods:
(1) Auger mining—Part 819
(2) Mountaintop removal—Part 824
(3) Steep slope mining—Part 826
(g) Soil quality: Prime farmland—Part 823
(h) Other activities:
(1) Coal processing off the mine permit area—Part 827
(2) In situ processing—Part 828

§ 812.12 Alphabetic index to performances.

The subjects addressed in the minimum performance standards of this Subchapter are discussed in the Parts or Sections indicated in the following index.

Item	Regulation			
Abandonment	816.53	816.133	817.131	817.133
	816.131	817.71(p)	817.132	827.12(m)
	816.132			
Acid mine drainage	710.5	816.55	817.50	817.55
	816.50			
Acid-forming material	710.5	816.72(b)	817.35	817.72(b)
	816.35	816.103	817.41	817.103
	816.41	816.104	817.43	824.11(b)
	816.43	816.105	817.48	828.11(c)
	816.48			
Affected area	816.38	816.132	817.46(u)	817.132
	816.46(u)	817.38	817.52(b)	824.11
	816.52(b)			
Agriculture or agricultural activities	816.54	817.54	822.2	822.13
	816.62(b)	817.62(b)	822.211	822.14
	816.111(b)	817.111(b)	822.12	824.11(a)
	816.133	817.133		
Air resources or air quality	815.12(n)	816.95	817.36	827.12(i)
	816.31	817.31	817.95	828.12
	816.36			
Alaska	812.11	Part 821		
Alluvial valley floors	812.11	Part 822		
Angle of repose	816.102(a)	816.105	817.102(a)	
Anthracite mines	812.11	Part 820		
Approximate original contour	816.38	816.105	819.11(d)	825.2
	816.71	817.38	824.1	826.12(b)
	816.104	817.71	824.11	826.13(a)
Aquifer	815.12(h)	816.52	817.52	822.11(a)
	816.50	817.50	817.126(b)	828.11(d)
Arid and semiarid areas	822.1			
Auger holes	819.11			
Berms	816.71(e)	817.71(e)		
Auger mining	812.11	Part 819		
Backfilling and grading/ regrading	815.12	816.82	817.24(a)	817.95(b)
	816.15	816.85(c)	817.31	817.100
	816.22(c)	816.95(b)	817.43(c)	817.101
	816.24(a)	816.100	817.44(c)	817.102
	816.31	816.101	817.45	817.103
	816.43(c)	816.102	817.46(s)	817.131
	816.44(c)	816.103	817.52(b)	824.11(b)
	816.45	816.104	817.71	825.2
	816.46(s)	816.105	817.72(e)	825.11(b)
	816.52(b)	816.131	817.73(b)	825.12(c)
	816.71	817.15	817.82	826.12
	816.72(e)	817.22(c)	817.85(c)	826.13
	816.73(b)			
Benches	816.71(e)	817.71(e)	824.11(b)	826.13(a)
	816.102	817.102	825.11(b)	
Best technology currently available:	810.2(e)	816.39	816.97	817.43(c)
	815.12	816.43(c)	817.31	817.44(a)
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Blasting	816.11	816.65	817.13	817.67
	816.13	816.67	817.61	817.68
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	816.64	817.11		
Boreholes	815.12(g)	816.14	817.13	817.15
	816.13	816.15	817.14	
Buffer zones	816.11	817.11	817.126	
	816.57	817.57		
Burning	816.86	816.95(b)	817.87	817.95(b)
	816.87	817.86		
Casing and sealing requirements	815.12(g)	816.14	817.13	817.15
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	816.132			
Coal processing plants	816.39	817.39	Part 827	

Item	Regulation			
Coal processing waste	816.14	816.85	817.46(o)	817.86
	816.46(o)	816.86	817.51(b)	817.87
	816.51	816.87	817.17(k)	817.88
	816.55(b)	816.88	817.81	817.91
	816.71(k)	816.91	817.82	817.92
	816.81	816.92	817.83	817.93
	816.82	816.93	817.85	827.12
	816.83	817.14		
Coal processing waste bank or pile	816.82	816.85	817.83	817.85
	816.83	817.82		
Coal removal	816.59	817.59	817.95(b)	818.12
	816.95(b)			
Combustible material	816.89	816.92(a)	817.91(b)	817.92(a)
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Concurrent surface and underground mining	812.11	Part 818		
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	816.32	816.102(b)	817.38	
Dams	816.49	817.49	817.123(b)	
Dams (constructed of coal processing waste)	816.91	816.93	817.92	817.93
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Discharge into underground mines	816.55	817.55		
Discharge structures	816.32	816.47	817.32	817.47
Disturbed area	810.2	816.71(d)	817.45	817.113
	816.42	816.92(c)	817.46	816.133
	816.45	816.113	817.52(b)	826.12(b)
	816.46	816.133	817.71(d)	827.12
	816.52(b)	817.42	817.92(c)	
Ditches	816.34	816.72(d)	817.35	817.72(d)
	816.35	816.83	817.42	817.83
	816.42	816.91(b)	817.71(d)	817.91(b)
	816.71(d)	817.34		
Diversions	815.12(f)	816.71(d)	817.43	817.72(d)
	816.43	816.72(d)	817.44	817.83
	816.44	816.83	817.47	817.92
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Downslope	826.12(a)			
Drainage	816.24(b)	816.72	817.32(b)	817.83
	816.31	816.73	817.34	817.85(c)
	816.32(b)	816.83	817.41	817.133
	816.34	816.85(c)	817.42	819.11(b)
	816.41	816.104	817.46	822.11
	816.42	816.133	817.71	826.12(e)
	816.46	817.24(b)	817.72	826.13(a)
	816.71	817.31	817.73	
Drill holes	815.12	816.13	817.13	828.11(b)
Dry streams	816.31	817.31		
Effluent limitations	815.12(k)	816.46	817.41	817.53(b)
	816.41	816.53(b)	817.42	817.71(a)
	816.42	816.71(a)	817.46	827.12(d)
Embankments	816.34(d)	816.46	817.34(d)	817.46
Embankments (constructed of coal processing waste)	816.89(c)	816.92	817.89(c)	817.92
	816.91	816.93	817.91	817.93
Exploration	812.1	Part 815	816.72(a)	817.72(a)
	812.11			
Exploration holes	815.12	816.14	817.13	817.15
	816.13	816.15	817.14	
Farming	822.12			
Fire hazards	816.86	816.97(d)	817.95(b)	819.11(a)
	816.87	817.86	817.97(d)	828.11(c)
	816.95(b)	817.87		
Fish and wildlife	810.2(e)	816.36	817.13	817.46
	815.12	816.39	817.15	817.97
	816.13	816.46	817.31	817.133
	816.15	816.97	817.32	827.12(j)
	816.31	816.133	817.36	828.11(c)
	816.32	817.12	817.39	

Item	Regulation			
Fugitive dust	816.95	817.95	827.12(i)	
Grades	816.32(b)	816.102	817.83	817.102
	816.34	816.104	817.46	824.11(b)
	816.46	816.105	817.73(b)	825.11(b)
	816.73(b)	817.32(b)		
Grazing	816.115	817.115	822.13	
Ground water	810.2	816.51	817.41	817.89(a)
	815.12(g)	816.52	817.43	817.101(b)
	816.13	816.65(i)	817.48	817.126(b)
	816.14	816.71(a)	817.50	819.11(a)
	816.41	816.89(a)	817.51	822.14
	816.43	816.101(b)	817.52	826.13(a)
	816.48	817.13	817.65(i)	828.11
	816.50	817.14	817.71(a)	828.12
Head of hollow fills	816.43	816.71	817.43	817.71
	816.51	816.73	817.51	817.73
Highwalls	816.101(b)	816.105	824.11	826.12(b)
	816.102	817.101(b)	825.2	826.13(a)
	816.104(b)	817.102	825.11(b)	
Hydrologic balance	810.2(g)	816.50	817.41	817.52
	815.12	816.51	817.42	817.53
	816.32(b)	816.52	817.43	817.54
	816.41	816.53	817.44	817.55
	816.42	816.54	817.45	817.56
	816.43	816.55	817.46	817.57
	816.44	816.56	817.47	817.65(j)
	816.45	816.57	817.48	819.11(d)
	816.46	816.65(j)	817.49	822.11
	816.47	816.104(b)	817.50	828.11(b)
	816.48	816.105	817.51	
	816.49	817.32(b)		
Impoundment	816.49	816.104(b)	817.89(c)	825.11(b)
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	816.93			
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	816.116	817.116		
Intermittent or perennial streams	815.12(f)	816.57	817.44	817.97(d)
	816.31	816.97(d)	817.57	817.126(a)
	816.44	817.31		
Leachate	816.71(a)	816.89(a)	817.83(a)	817.89(a)
	816.83(a)	817.71(a)		
Monitoring systems	815.12	816.91(c)	817.38	817.97
	816.13	816.95	817.52	817.125
	816.14	816.97	817.53(b)	817.131
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	816.52	816.132	817.91(c)	822.12
	816.53(b)	817.13	817.95	822.14
	816.67	817.14		
Mountaintop removal	812.11	Part 824		
Mulch	816.34	816.71(c)	817.34	817.71(c)
	816.41	816.91(b)	817.41	817.91(b)
	816.45(f)	816.95(b)	817.45(f)	817.95(b)
	816.46	816.114	817.46	817.114
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Outslope	816.72	816.102(b)	817.73	824.11(b)
	816.73	817.72	817.102(b)	
Overburden	815.12(h)	816.102	816.116	817.101(a)
	816.22(e)	816.104	817.22(e)	817.102
	816.50	816.105	817.50	817.116
	816.101(a)			
Overburden	815.12(h)	816.101(a)	816.116	817.101(a)
	816.22(e)	816.102	817.22(e)	817.102
	816.50	816.104	817.50	817.116
	816.52	816.105	817.52	
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	816.44	817.43		
Permanent impoundments	816.46(u)	816.56	817.49	827.12(e)
	816.49	817.46(u)	817.56	
Permanent seals	816.15	817.15		
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	816.25	816.111	817.38	817.114
	816.31	816.112	817.41	817.116(a)
	816.32	816.113	817.46(u)	817.117
	816.38	816.114	817.50	817.132
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	816.43	816.92(b)	817.44(b)	817.93
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	816.46	817.71(a)	818.12	826.2
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	816.89	817.97	820.11	826.12(b)
	816.97	817.100	822.12	826.13(b)
	816.100	817.111	822.14	827.11
	816.111	817.131	823.11	827.12
	816.131	817.132	823.14	
	816.132	818.1		
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Recovery of coal	810.2(b)	816.59	817.59	818.2(b)
	811.2(c)	816.95(b)	817.95(b)	818.12
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Recurrence interval	816.43	816.92(b)	817.44	817.92(b)
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Revegetation	810.2	816.95(b)	817.38	817.111
	815.12(e)	816.100	817.42	817.112
	816.25	816.111	817.43(c)	817.113
	816.38	816.112	817.44(c)	817.114
	816.42	816.113	817.45	817.115
	816.43(c)	816.114	817.46	817.116
	816.44(c)	816.115	817.71	817.117
	816.45	816.116	817.89	817.131
	816.46	816.117	817.95(b)	824.11(c)
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	816.44	816.93(b)	817.45	817.93(b)
	816.45			
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	816.24(a)	816.95(b)	817.41	817.106
	816.32(b)	816.102(c)	817.43	817.111
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	816.41	816.106	817.46	817.117
	816.43	816.111	817.48	817.133
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PART 815—PERMANENT PROGRAM PERFORMANCE STANDARDS—COAL EXPLORATION

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AUTHORITY: Secs. 102, 201, 503, 504, 506, 512, 515, 516 and 517 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 471, 473, 483, 486, 495 and 498 (30 USC 1202, 1211, 1251, 1253, 1254, 1256, 1262, 1265, 1266, 1267).

§ 815.1 Scope.

This Part sets forth minimum performance standards required for coal exploration operations which are not conducted within an area covered by a permit issued for surface coal mining and reclamation operations.

§ 815.2 Objectives.

The objectives of this Part are to:

(a) Provide any person who conducts or intends to conduct coal exploration with the minimum performance standards under a State or Federal program; and

(b) Prevent degradation of the environmental quality during and following the conduct of coal exploration operations.

§ 815.4 Responsibility of persons conducting coal exploration.

At least 30 days prior to commencing exploration, each person who conducts or intends to conduct coal exploration operations shall file with the regulatory authority a notice of intention to explore. If more than 250 tons of coal are to be removed during exploration, the person engaged in the coal exploration shall obtain the written approval from the regulatory authority for the notice of intention to explore. Each person who conducts exploration activities shall comply with the reclamation procedures described in the notice of intention.

§ 815.11 Required documents.

(a) Each person who conducts any coal exploration operation shall, while in the exploration area, possess the following:

(1) If 250 or less tons of coal are removed during exploration, a receipt from the regulatory authority as evidence of the filing of a notice of intention to explore as required by CFR 776.11(a); or

(2) If more than 250 tons are to be removed during exploration, written approval of the regulatory authority for the activities granted under 30 CFR 776.11.

(b) Upon the request of any agent or employee of the regulatory authority, each person who conducts coal exploration operations shall immediately present the receipt or necessary written approval to the agent or employee so that the agent or employee may read and copy the contents of the receipt or approval.

§ 815.12 Performance standards for coal exploration operations.

Any exploration activity shall comply at a minimum with the performance standards of this Subchapter.

(a) The person who conducts exploration shall record the cumulative amount of coal removed during coal exploration by drilling, coring, trenching, mining or other techniques. This record shall be kept up to date and available to the regulatory authority at the exploration site.

(b) The person who conducts exploration shall not remove more than 250 tons of coal during exploration without the specific written approval of the regulatory authority.

(c) Vehicular travel on other than established public or private graded and surfaced roads shall be limited by the person who conducts coal exploration to that absolutely necessary to conduct the exploration. Travel shall be confined to graded and surfaced roads during and following periods of precipitation when vehicles would cause excessive damage to vegetation or rutting of the land surface, or when vehicles could become immobilized in soft earth materials and cause excessive disturbance.

(d) Any new road in the exploration area shall be constructed, utilized, maintained and restored in accordance with the following requirements:

(1) Roads shall be located, so far as possible, on the flattest and most stable available slopes to minimize erosion.

(2) Vehicles shall not enter an active stream channel unless specific crossing locations are first approved by the regulatory authority as temporary routes across small streams and they do not adversely affect sedimentation. All other stream crossings shall be made using bridges, culverts, or other structures designed, constructed, and maintained to minimize disturbance to water quality and quantity.

(3) Topsoil shall be removed, under paragraph (e) of this section, before use of a surface area as a road if that use may cause substantial damage to fish, wildlife and related environmental values or to site productivity.

(4) Each new road shall be designed, constructed, and maintained to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or runoff outside the permit area. Permanent roads constructed or modified during exploration and remaining after exploration activities are completed shall be designed, constructed, and maintained in accordance with 30 CFR 816.31-816.38.

(5) Each existing road affected by exploration shall be used and maintained by the person who conducts exploration only in compliance with applicable Federal, State and local requirements.

(e)(1) The entire "A" horizon of the soil and as much other subsoil and unconsolidated earth materials as are necessary to meet the revegetation requirement of paragraph (m) of this section shall be removed before:

(i) Disturbance of an area by off-road travel which may cause substantial damage to fish, wildlife and related environmental values or to site productivity:

(ii) Construction of roads;

(iii) Any drilling that involves construction of a drill pad or flat surface and disposal of large amounts of drilling fluid or cuttings; and

(iv) Establishment of office facilities, storage facilities, repair facilities, or testing facilities.

(2) Removed topsoil shall be stored under the requirements of Section 816.23 and shall be redistributed under the requirements of 30 CFR 816.24, as soon as the coal exploration is complete. If the person engaged in exploration submits a permit application under 30 CFR 778-791, topsoil redistribution may be deferred until action is taken on the application by the regulatory authority.

(f) With the exception of small and temporary diversions of overland flow of water around new roads, drill pads, and support facilities, no ephemeral, intermittent or perennial streams shall be diverted during coal exploration. Overland flow of water shall be diverted in a manner that prevents, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or runoff outside the permit area and which causes no violations of applicable State or Federal requirements.

(g) Each drill hole, borehole, well, or other drilled excavation created during the exploration shall either be plugged and capped with at least 10 feet of cement or shall be managed to prevent water pollution and mixing of ground and surface waters and to ensure the safety of people, livestock, wildlife, and machinery in each area where these openings could be a hazard. If a mining permit that requires compliance with 30 CFR 816.13 and 816.14 has not been approved the person who conducts coal exploration shall not leave any open holes. Each excavation encountering ground water shall be filled, plugged, or otherwise

closed to prevent adverse changes in water quality or quantity, in accordance with a plan approved by the regulatory authority before the exploration operation begins.

(h) The person who conducts coal exploration shall, to the maximum extent practicable, measure important environmental characteristics of the exploration area during coal exploration so as to minimize environmental damage and to provide adequate information for a mining permit application if the person submits an application under 30 CFR 778-791. The measurements to be considered include, but are not limited to, overburden characteristics that could affect water quality and revegetation, soils characteristics, vegetation, hydrogeologic conditions, aquifer characteristics, important hydrologic, biologic and geologic characteristics of stream valleys west of the 100th meridian west longitude, air quality, meteorological data where necessary, surface water flow data, and biological data.

(i) The person who conducts exploration shall make available to the regulatory authority all environmental monitoring data collected during coal exploration.

(j) No habitats of unique value for fish, wildlife and other related environmental values shall be disturbed during exploration activities.

(k) All water discharged or affected by coal exploration shall use treatment facilities approved by the regulatory authority and shall meet the effluent limitations of 30 CFR 816.42(a) upon leaving the exploration site.

(l) All facilities and equipment shall be removed from the exploration area promptly after they are no longer needed for exploration activities with the exception of those facilities and equipment that the regulatory authority determines shall remain to:

(1) Provide additional environmental quality data;

(2) Reduce or control the on- and off-site effects of the exploration activities;

(3) Facilitate future mining under an approved mining and reclamation plan and permit.

(m) Revegetation of areas disturbed by coal exploration operations shall be performed by the person who conducts exploration in accordance with 30 CFR 816.111-816.115.

§ 815.13 Requirement for a permit.

If coal extracted during exploration is sold commercially, the person who conducts in the operation must have obtained a permit for the operation under 30 CFR 778-791 unless the person who conducts the exploration has demonstrated, and the regulatory authority has determined, that the sale is to test coal properties necessary for the development of operations for which a permit application may be submitted.

PART 816—PERMANENT PROGRAM ENVIRONMENTAL PERFORMANCE STANDARDS—SURFACE MINING ACTIVITIES

Sec.

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AUTHORITY: Secs. 102, 201, 501, 503, 504, 508, 515, 517, 519, 701, 717, and 719 of Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 471, 478, 486, 498, 501, 516, 526 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1258, 1265, 1267, 1269, 1291, 1307, 1309).

§ 816.1 Scope.

This Part sets forth the minimum performance standards for surface mining activities. Performance standards for other mining activities are set forth in Parts 817-828 of this Subchapter.

§ 816.2 Objectives.

This Part is intended to ensure that all surface mining activities are conducted in a manner which preserves and enhances environmental and other values in accordance with the Act.

§ 816.11 Signs and markers.

(a) *Specifications.* Each sign and marker required to be posted under this Part shall—

(1) Be of a uniform design throughout the operation that can be seen and read easily;

(2) Be made of durable material; and

(3) Conform to each local ordinance and code.

(b) *Duration of maintenance.* Each person who conducts surface mining activities shall maintain each sign and marker during all activities to which they pertain.

(c) *Mine and permit identification signs.*

(1) Each person who conducts surface mining activities shall display identification signs at each point of access to the permit area from public roads.

(2) The signs shall show the name, business address, and telephone number of the person who conducts the surface mining activities and the identification number of each current permit authorizing surface mining activities.

(3) Each sign shall not be removed until after the release of all bonds.

(d) *Perimeter markers.* Each person who conducts surface mining activities shall clearly mark the perimeter of the permit area before submitting a permit application.

(e) *Buffer zone markers.* Each person who conducts surface mining activities shall mark each buffer zone, as required by Section 816.57 of this Part. Each buffer zone marker shall be designed and placed in the same manner as the perimeter markers. Each buffer zone marker shall be located along the boundary of the buffer zone.

(f) *Blasting signs.* If blasting is conducted incident to surface mining activities, the person who conducts these activities shall conspicuously display—

(1) Signs reading "Blasting Area" at the edge of blasting areas along roads within the permit area; and

(2) Signs clearly explaining the blasting warning and all-clear signals at all entrances to the permit area from a public road or highway.

(g) *Topsoil markers.* Where topsoil or other vegetation-supporting material is required to be segregated and stockpiled under Section 816.23, the person who conducts the surface mining activities shall clearly mark the stockpiled material.

§ 816.13 Casing and sealing of drilled holes: General requirements.

Each exploration hole, other borehole, well, or other exposed underground opening shall be cased, sealed, or otherwise managed to prevent pollution and mixing of surface or ground water, and to ensure the safety of people, livestock, wildlife, and machinery in the area where these openings could be a hazard. Each exploration hole, borehole, well, or other underground opening that is uncovered or exposed by mining activities within the permit area shall be permanently closed, in a manner approved by the regulatory authority, unless the opening is approved for monitoring. This Section does not apply to holes drilled and used for blasting.

§ 816.14 Casing and sealing of drilled holes: Temporary.

Each exploration hole, other borehole, well and other exposed underground opening which has been identified in the approved mining and reclamation plan to be used for return of coal processing waste or water to underground workings or to be used to monitor ground water conditions shall be temporarily sealed before use and shall be protected during use by barricades or fences or other protective devices approved by the regulatory authority. Any barricade, fence, or other protective device shall be periodically inspected and maintained in good operating condition by the person who conducts the surface mining activities.

§ 816.15 Casing and sealing of drilled holes: Permanent.

Each exploration hole, other borehole, well, and other exposed underground opening to the surface shall be capped, sealed, or backfilled, as required by the regulatory authority consistent with 30 CFR 75.1711. Closure measures shall be of a permanent design to prevent access to the mine workings by people and animals and to prevent the flow of water.

§ 816.21 Topsoil: General requirements.

(a) Before disturbance of an area, topsoil and subsoils to be saved under Section 816.22 shall be removed from the area as a separate operation and segregated from other material.

(b) After removal, topsoil shall either be immediately redistributed in accordance with Section 816.24 or stockpiled pending redistribution, if permissible under Section 816.23.

§ 816.22 Topsoil: Removal.

(a) *Timing.* Topsoil shall be removed after the vegetative cover that would interfere with the use of the topsoil is cleared from all areas to be affected but before any drilling, blasting, mining, or other surface disturbance of the areas.

(b) *Materials to be removed.* All topsoil shall be removed unless use of alternative materials is approved by the regulatory authority to be segregated in accordance with paragraph (e) of this Section. If use of alternative materials is approved, all materials to be redistributed shall be removed.

(c) *Additional material to be removed in thin topsoil situations.* If the topsoil is less than 6 inches, a 6 inch layer that includes the A horizon and the unconsolidated materials immediately below the A horizon, or the A horizon and all unconsolidated material if the total available is less than 6 inches, shall be removed and the mixture segregated and replaced as the surface soil layer.

(d) *Subsoil segregation.* The B horizon and portions of the C horizon or other underlying layers demonstrated to have qualities for root development comparable to the B or C horizons shall be segregated and replaced as subsoil if the regulatory authority determines that this segregation and replacement is necessary or desirable to ensure soil productivity consistent with the approved post-mining land use.

(e) *Topsoil substitutes and supplements.* Selected overburden materials may be substituted for, or used as a supplement to, topsoil where the resulting soil medium is equal to or more suitable for vegetation, and if all the following requirements have been met:

(1) It is demonstrated to the regulatory authority by the results of chemical and physical analyses of overburden and topsoil that the selected overburden materials or an overburden and topsoil mixture is more suitable for restoring land capability and productivity and that it is the best available material to support and sustain the approved vegetation. These analyses shall include determinations of pH, sulfide content that when oxidized will lower the pH, percent organic material, nitrogen, phosphorus, potassium, texture class, water-holding capacity, and such other analyses as required by the regulatory authority. The regulatory authority may also require that results of field-site trials or greenhouse tests be used to demonstrate the feasibility of using such overburden materials.

(2) The chemical and physical analyses and the results of field-site trials and greenhouse tests submitted to the regulatory authority shall be accompanied by a certification from a qualified soil scientist or agronomist, stating, on the basis of the test results, that the proposed substitute material is equal to or more suitable for sustaining the vegetation than is the available topsoil, that the substitute material is the

best available material to support the vegetation, and that the tests and analyses were conducted under his or her supervision and used standard testing procedures.

(3) The tests and analyses shall be conducted by a laboratory approved by the regulatory authority.

(4) The alternative material shall be removed, segregated, and replaced in compliance with the requirements for topsoil under this Section.

(f) *Limits on topsoil removal area.* Where the removal of vegetative material, topsoil or other materials may result in erosion which may cause air or water pollution, the person who conducts surface mining activities shall—

(1) Limit the size of the area from which topsoil is removed at any one time;

(2) Redistribute the surface soil layer at a time when the physical and chemical properties of topsoil can be protected and erosion can be minimized; and

(3) Take such other measures as the regulatory authority may approve or require to control erosion.

§ 816.23 Topsoil: Storage.

(a) The topsoil and other materials removed under Section 816.22 shall be stockpiled only when it is impractical to promptly redistribute such materials on regraded areas.

(b) The stockpiled materials shall be placed on a stable area within the permit area where the materials shall not be disturbed or exposed to excessive water or wind erosion, or to contaminants which lessen the capability to support vegetation before they can be redistributed.

(1) Stockpiles shall be selectively placed and protected from wind and water erosion, unnecessary compaction, and contamination by undesirable materials either by—

(i) An effective cover of nonnoxious, quick-growing annual and perennial plants, seeded or planted during the first normal period for favorable planting conditions; or

(ii) Other methods demonstrated to and approved by the regulatory authority to provide equal protection.

(2) Unless approved by the regulatory authority, stockpiled topsoil and other materials shall not be moved until required for redistribution on a regraded area.

§ 816.24 Topsoil: Redistribution.

(a) After final grading and before the replacement of topsoil and other materials segregated in accordance with Section 816.23, regraded land shall be scarified or otherwise treated to eliminate slippage surfaces and to promote root penetration. If the person who conducts the surface mining activities shows, through appropriate tests, and the regulatory authority approves, that no harm will be caused to the topsoil and vegetation, the scarification may be conducted after topsoiling.

(b) Topsoil and other materials shall be redistributed in a manner that—

(1) Achieves an approximate uniform, stable thickness consistent with the post-mining land uses, slopes, agricultural aspects and surface drainage system;

(2) Prevents excess compaction of the topsoil; and

(3) Protects the topsoil from wind and water erosion before and after it is seeded and planted.

§ 816.25 Topsoil: Nutrients and soil amendments.

Nutrients and soil amendments in the amounts determined by soil tests shall be applied to the redistributed surface soil layer so that it supports the post-mining land use approved by the regulatory authority, and meets the revegetation requirements of Sections 816.111–816.117. All soil tests shall be conducted by a laboratory approved by the regulatory authority and certified by a qualified agronomist or soil scientist.

§ 816.31 Roads and associated structures: General requirements.

(a) Each person who conducts surface mining activities shall design, construct, utilize, maintain, and reclaim all roads, road rights-of-way, and associated structures to meet the requirements of Sections 816.32–816.35, 816.38, and 816.95 to control or prevent erosion and siltation, air and water pollution, and damage to public or private property.

(1) To the extent possible using the best technology currently available, roads, road rights-of-way, associated structures, and other transportation facilities shall not cause damage to fish, wildlife, and related environmental values and shall not cause additional contributions of suspended solids to streamflow, or to runoff outside the permit area. In no event shall contributions of suspended solids be in excess of limitations set by applicable State or Federal law.

(2) All roads shall be removed and the land affected regraded and revegetated in accordance with the requirements of Section 816.38 unless—

(i) Retention of the road is approved as part of the approved post-mining land use or as being necessary to control erosion adequately;

(ii) The necessary maintenance is assured; and

(iii) All drainage shall be controlled according to Section 816.34.

§ 816.32 Road construction: Location.

(a) All roads shall be located insofar as possible on ridges or on the flattest and most stable available slopes to minimize erosion. Except as otherwise specifically authorized in this Section, no part of any road shall be located in the channel of a perennial stream. Stream fords are prohibited unless they are specifically approved by the regulatory authority as temporary routes across non-flowing streams that will not adversely affect sedimentation or fish, wildlife and related environmental values and that will not be used for coal haulage. All other stream crossings shall be made using bridges, culverts, or other structures designed, constructed, and maintained to meet the requirements of this Section. Roads shall not be constructed in a manner that increases erosion or causes additional downstream sedimentation or flooding.

§ 816.33 Road construction: Erosion control.

In order to control erosion and subsequent disturbance of the hydrologic balance, roads shall be designed, constructed, and maintained in compliance with the following:

(a) *Vertical alinement.* Except where the regulatory authority requires lesser grades to control erosion, road grades shall be as follows:

(1) The overall grade shall not exceed 1*v*:10*h* (10 percent).

(2) The maximum grade shall not exceed 1*v*:6.5*h* (15 percent).

(3) There shall not be more than 300 feet of grade exceeding 10 percent within any consecutive 1,000 feet of road constructed.

(4) The road surface shall be sloped toward the ditch line at the minimum rate of one-half inch per foot of surface width or crowned at the minimum rate of one-half inch per foot of surface width as measured from the centerline of the road.

(b) *Road cuts.* This paragraph applies to roads that are to remain in place and be used for more than 5 years or that are to remain as part of the approved post-mining land use. Cut slopes shall not be steeper than specifically authorized by the regulatory authority. The regulatory authority shall not authorize slopes steeper than 1*v*:1.5*h* in unconsolidated materials or 1*v*:0.25*h* in rock except that steeper slopes may be specifically authorized by the regulatory authority if geotechnical analysis demonstrates that a minimum safety factor of 1.5 can be maintained.

(c) *Road embankments.* This paragraph applies to roads that are to remain in place and be used for more than 5 years or that are to remain as part of the approved post-mining land use. Embankment sections shall be

constructed in accordance with the following provisions:

(1) All vegetative materials and topsoil shall be removed from the embankment foundation to ensure stability and no vegetative materials or topsoil shall be placed beneath or in any road embankment.

(2) When an embankment is to be placed on side slopes exceeding 1*v*:5*h* (20 percent) the existing ground shall be plowed, stepped, and keyed in a manner which ensures the stability of the fill. The minimum dimensions of the keyway shall be 10 feet wide and 2 feet deep below the toe of fill. No material shall be placed, or allowed to slide, below the toe.

(3) Material containing by volume less than 25 percent of rock larger than 6 inches in greatest dimension shall be spread in successive horizontal layers not exceeding 12 inches in thickness before compaction.

(4) Where the material for an embankment consists of rock, broken stone, or fragmented material of a size that makes placing in 12-inch layers impossible under paragraph (c)(3) of this section, the embankment shall be constructed in layers less than 24 inches in thickness, provided the individual pieces are placed so that there is no nesting and all the voids are filled with finer material.

(5) Each layer of the embankment shall be completed, leveled, and compacted before the succeeding layer is placed. Loads of material shall be leveled as placed and kept smooth. The successive layers shall be compacted evenly by routing the hauling and leveling equipment over the layers already in place and by distributing the travel over the entire width of the embankment. This routine shall be continued until no visual horizontal movement of the embankment material is apparent.

(6) Successive lifts shall not be placed until the previous layer is compacted to achieve a density throughout the preceeding lift of at least 90 percent of the maximum dry density determined in accordance with the American Association of State Highway and Traffic Officers (AASHTO) T-99. The AASHTO technical specification T-99 mentioned in this paragraph is hereby incorporated by reference. This work is incorporated as it exists on the date of adoption of this Part and notices of changes made in these materials will periodically be published in the FEDERAL REGISTER. AASHTO technical specification T-99 is available for inspection at OSM's office in OSM regional offices and in OSM's office in the Department of the Interior, 18th and C Streets, NW., Washington, D.C. 20240.

(7) Material shall be placed in an embankment only when its moisture content is within 4 percent of the optimum moisture content determined in accordance with AASHTO T-99.

(8) Embankment slopes shall not be steeper than 1*v*:2*h* (50 percent).

(9) The minimum safety factor for all embankments shall be 1.25, or such higher safety factor as the regulatory authority may specify.

(d) *Natural drainage.* Natural drainways shall not be altered or relocated for the purposes of road construction without the prior approval of the regulatory authority. The regulatory authority may approve alterations and relocations only if—

(1) The natural drainage is not blocked;

(2) No damage occurs to the hydrologic balance; and

(3) There is no adverse impact on adjoining landowners.

§ 816.34 Road construction: Drainage.

(a) *General.*

(1) Each road shall be designed, constructed, and maintained to have adequate drainage using structures such as, but not limited to, ditches, cross drains, and ditch relief drains. For roads that are to be maintained for more than 1 year, the water-control system shall be designed to safely pass the peak runoff from a 10-year 24-hour precipitation event or greater if required by the regulatory authority. Drainage pipes and culverts shall be constructed to avoid plugging or collapse and erosion at inlets and outlets. Drainage ditches shall be placed at the toe of all cut slopes formed by construction of roads. Trash racks and debris basins shall be installed in the drainage ditches wherever debris from the drainage area could impair the functions of drainage and sediment control structures.

(2) All drainage from roads and associated drainage structures shall pass through sediment control devices such as sediment ponds, sediment traps, vegetation filter strips, vegetated drains, straw dikes, mulches, check dams, and dugout ponds.

(b) *Ditches.* A ditch shall be provided on both sides of a through-cut and on the inside shoulder of a cut-fill section, with ditch relief cross-drains being spaced according to grade. Water shall be intercepted before reaching a switchback or large fill and drained safely away in accordance with this Section. Water on a fill or switchback shall be released below the fill, using conduit or riprapped channels, and shall not be discharged onto the fill.

(c) *Culverts.* Ditch relief culverts shall be installed according to the following provisions:

(1) Road grade:

In percent	Spacing of culverts, in ft, not more than—
2 to 5	800
6 to 10	300
11 to 15	200

(2) Each culvert shall be adequate to safely pass the peak runoff from a 10-year 24-hour precipitation event and shall cross the road at not less than a 30° angle downgrade. The culvert may be designed to carry less than the peak runoff if the ditch will remain stable.

(3) The inlet end shall be protected by a rock headwall or other material approved by the regulatory authority and the outlet end shall be placed below the toe of the fill with an apron of rock riprap or other approved material.

(4) The culvert shall be covered by compacted fill to a minimum depth of 1 foot or half the culvert diameter, whichever is greater.

(5) The culvert shall be capable of sustaining design loads.

(d) *Stream crossings.* Drainage structures are required for stream channel crossings. Drainage structures shall not affect the normal flow or gradient of the stream. In designing drainage structures consideration shall be given to the time of year the stream is crossed and the length of time the structure is used. Embankments constructed across streams shall not exceed 15 feet in height, measured on the upstream side, unless approved by the regulatory authority. Stream crossings which have drainage areas greater than 100 acres shall be designed to safely pass the 100-year storm or larger event as specified by the regulatory authority.

§ 816.35 Road construction: Surfacing.

Roads shall be surfaced with rock or other material approved by the regulatory authority as sufficiently durable. Toxic or acid-forming substances shall not be used. Vegetation shall not be cleared for more than the width necessary for road and associated ditch construction, to serve traffic needs and for utilities.

§ 816.36 Other transportation facilities.

Railroad loops, spurs, sidings, or other transport facilities shall be designed, constructed, maintained, and reclaimed to—

(a) Prevent, to the extent possible using the best technology currently available—

(1) Damage to fish, wildlife and related environmental values; and

(2) Additional contributions of suspended solids to streamflow or runoff outside the permit area. In no event shall contributions be in excess of

limitations set by applicable State or Federal law.

(b) Control and minimize diminution or degradation of water quality and quantity.

(c) Control and minimize erosion and siltation.

(d) Control and minimize air pollution.

(e) Prevent damage to public or private property.

§ 816.38 Restoration of roads.

(a) Unless the regulatory authority approves retention of the road as suitable for the approved post-mining land use, immediately after a road becomes no longer needed for operations, reclamation, or monitoring—

(1) The road shall be closed to vehicular traffic;

(2) All bridges and culverts shall be removed;

(3) Cross drains, dikes, and water bars shall be constructed to prevent erosion;

(4) Road surfaces shall be scarified and covered with topsoil; and

(5) The area affected shall be returned to approximate original contour and revegetated in accordance with Sections 816.111–816.117.

(b) Unless otherwise authorized by the regulatory authority, all road surfacing materials shall be removed and handled or conveyed and disposed of in accordance with Section 816.89.

§ 816.39 Support facilities and utility installations.

(a) The support facilities required for or used incidental to the operation of the mine, including but not limited to mine buildings, coal loading facilities at or near the mine site, coal storage facilities, equipment storage facilities, sheds, shops, and other buildings, shall be designed, constructed, and located to prevent or control erosion and siltation, water pollution, or damage to public or private property and shall comply with all the environmental and other performance standards of this Part. Support facilities shall be designed, constructed, maintained, and used in a manner which prevents, to the extent possible using the best technology currently available—

(1) Damage to fish, wildlife and related environmental values;

(2) Additional contributions of suspended solids to streamflow or runoff outside the permit area. In no event shall such contributions be in excess of limitations set by applicable State or Federal law.

(b) All surface mining activities shall be conducted in a manner which prevents damage, destruction, or disruption of services provided by oil, gas, and water wells; oil, gas, and coal-slurry pipelines; railroads; and electric and telephone lines which pass over, under, or through the permit area, unless otherwise approved by the owner and the regulatory authority.

§ 816.41 Hydrologic balance: General requirements.

(a) Surface mining activities shall be planned and conducted to minimize disturbance to the prevailing hydrologic balance in order to prevent long-term adverse changes in the hydrologic balance that could result from those activities, on both the mine plan and affected areas.

(b) Changes in water quality and quantity, in the depth to ground water, and in the location of surface water drainage channels shall be minimized so that the approved post-mining land use of the disturbed land is not adversely affected.

(c) In no case shall applicable Federal and State water quality statutes, regulations, standards, or effluent limitations be violated.

(d) Operations shall be conducted to minimize water pollution and, where necessary, treatment methods shall be used to control water pollution.

(1) A person who conducts surface mining activities shall emphasize mining and reclamation practices that will prevent or minimize water pollution and changes in flow in preference to the use of water treatment facilities.

(2) Practices to control and minimize pollution include, but are not limited to—

(i) Stabilizing disturbed areas through land shaping;

(ii) Diverting runoff;

(iii) Achieving quickly germinating and growing stands of temporary vegetation;

(iv) Regulating channel velocity of water;

(v) Lining drainage channels with rock or vegetation;

(vi) Mulching;

(vii) Selectively placing and sealing acid-forming and toxic-forming materials; and

(viii) Selectively placing waste materials in backfill areas.

(3) If these practices are not adequate to meet the hydrologic requirements of this Part, the person who conducts the surface mining activities shall operate and maintain the necessary water treatment facilities for as long as treatment is required.

§ 816.42 Hydrologic balance: Water quality standards and effluent limitations.

(a) All surface drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted, shall be passed through a sedimentation pond or a series of sedimentation ponds before leaving the permit area. Sedimentation ponds and other treatment facilities shall be maintained until drainage from the disturbed area has met the ambient surface water quality requirements of Section 816.52 and the revegetation requirements of Sections 816.111–816.117. The regulatory authority may grant exemptions from this requirement only when the disturbed drainage area within the total disturbed area is small and if the person who conducts the surface mining activities demonstrates to the regulatory authority that sedimentation ponds and treatment facilities are not necessary to meet the effluent limitations of this Section and maintain water quality in downstream receiving waters. For the purposes of this Section, disturbed area shall not include those areas in which only diversion ditches, sedimentation ponds, or roads are installed in accordance with this Part and the upstream area is not otherwise disturbed by the person who conducts the surface mining activities. Sedimentation ponds required by this Section shall be constructed in accordance with Section 816.46 in appropriate locations before beginning any surface mining activities in the affected drainage area. Discharges from areas disturbed by surface mining activities shall comply with all applicable Federal and State laws and regulations and, at a minimum, the following numerical effluent limitations:

Effluent limitations, in milligrams per liter (mg/l) except for pH

Effluent characteristics[1]	Maximum allowable[2]	Average of daily values for 30 consecutive discharge days[2]
Iron, total	7.0	3.5
Manganese, total[3]	4.0	2.0
Total suspended solids[4]	70.0	35.0
pH	Within range of 6.0 to 9.0[5]	

[1] To be determined according to collection and analytical procedures adopted by the Environmental Protection Agency's regulations for wastewater analyses (40 CFR 136).

[2] Based on representative sampling.

[3] The manganese limitations shall not apply to untreated discharges which are alkaline as defined by the Environmental Protection Agency (40 CFR 434).

[4] In Arizona, Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming, total suspended solids limitations will be determined on a case-by-case basis, but they must not be greater than 45 mg/l (maximum allowable) and 30 mg/l (average of daily value for 30 consecutive discharge days) based on a representative sampling.

[5] Where the application of neutralization and sedimentation treatment technology results in inability to comply with the manganese limitations set forth, the regulatory authority may allow the pH level in the discharge to exceed to a small extent the upper limit of 9.0 in order that the manganese limitations will be achieved.

(b) A discharge from the disturbed areas is not subject to the effluent limitations of this Section if—

(1) The discharge is demonstrated by the discharger to have resulted from a precipitation event larger than a 10-year 24-hour precipitation event or from a snowmelt of equivalent volume; and

(2) The discharge is from facilities designed, constructed, and maintained in accordance with the requirements of this Part.

(c) Adequate facilities shall be installed, operated, and maintained to treat any water discharged from the disturbed area so that it complies with applicable Federal and State laws or regulations and the limitations of this Section. If the pH of water to be discharged from the disturbed area is less than 6.0, an automatic lime feeder or other automatic neutralization process approved by the regulatory authority shall be installed, operated, and maintained. The regulatory authority may authorize the use of a manual system if it finds that—

(1) Small and infrequent treatment requirements to meet applicable standards do not require use of an automatic neutralization process;

(2) The mine normally produces less than 500 tons of run-of-mine coal per day; and

(3) Timely and consistent treatment is ensured.

§ 816.43 Hydrologic balance: Diversions and conveyance of overland flow and shallow ground water flow.

Overland flow including flow through litter, and shallow ground water flow from undisturbed areas may be diverted away from disturbed areas by means of temporary or permanent diversions if required or approved by the regulatory authority as necessary to minimize erosion and to prevent or remove water from contact with acid-forming or toxic-forming materials. The following requirements shall be met for all diversions and for all collection drains that are used to transport water into water-treatment facilities.

(a) Temporary diversions shall be constructed to pass safely the peak runoff from a precipitation event with a 3-year recurrence interval, or a larger event if specified by the regulatory authority.

(b) To protect fills and property and to avoid danger to public health and safety, permanent diversions shall be constructed to pass safely the peak runoff from a precipitation event with a 10-year recurrence interval, or a larger event if specified by the regulatory authority. Permanent diversions shall be constructed with gently sloping banks that are stabilized by vegetation. Asphalt, concrete, or other similar linings shall not be used unless specifically required by the regulatory authority to prevent seepage or to provide stability.

(c) Diversions shall be designed, constructed, and maintained in a manner which prevents additional contributions of suspended solids to streamflow and to runoff outside the permit area, to the extent possible using the best technology currently available. Appropriate sediment control measures for these diversions shall include, but not be limited to, maintenance of appropriate gradients, channel lining, revegetation, roughness structures, and detention basins.

(d) No diversion shall be constructed on or pass through existing slides or located so as to increase the potential for slides.

(e) When no longer needed, each temporary diversion shall be removed and the affected land regraded, topsoiled, and revegetated in accordance with Sections 816.24, 816.25, 816.101, and 816.111–816.117.

(f) Diversion design shall incorporate the following:

(1) Any channel lining shall be designed using standard engineering practices to safely pass the design velocities. Riprap shall comply with the requirements of Section 816.72(b)(5).

(2) The design freeboard shall be no less than calculated using the following equation:

$$f=1+(0.025\times v\times d)$$

Where f=freeboard, in feet, v=design velocity, in feet per second, and d=depth of flow, in feet. Additional freeboard protection shall be provided for transition of flows and for critical areas such as swales and curves.

(3) Energy dissipators shall be installed at discharge points where diversions intersect with natural streams.

(4) Excess excavated material not necessary for diversion channel geometry or regrading of the channel shall be disposed of in accordance with 30 CFR 816.71–816.73.

(5) Topsoil shall be handled in compliance with 30 CFR 816.21–816.25.

§ 816.44 Hydrologic balance: Stream channel diversions.

(a) Flow from perennial and intermittent streams within the permit area may be diverted if—

(1) The diversions are approved by the regulatory authority as necessary to comply with other performance standards in this Subchapter; and

(2) The diversions comply with local, State, and Federal statutes and regulations.

(b) When streamflow is allowed to be diverted, the new stream channel shall be designed, constructed, and removed in accordance with the following requirements:

(1) The longitudinal profile of the stream, the channel and the floodplain shall be designed and constructed to remain stable and to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or to runoff outside the permit area. In no event shall the contributions be in excess of requirements set by applicable State or Federal law. Erosion control structures such as channel lining structures, retention basins, and artificial channel roughness structures shall be used in diversions only when approved by the regulatory authority as being necessary to control erosion. These structures shall be approved for permanent diversions only where they are stable and will require infrequent maintenance.

(2) Channel, bank, and flood-plain configurations shall be adequate to pass safely the peak runoff of a 24-hour precipitation event with a 10-year recurrence interval for temporary diversions and a 100-year recurrence interval for permanent diversions, or larger events as specified by the regulatory authority.

(c) When no longer needed to achieve the purpose for which they were authorized, all temporary stream channel diversions shall be removed and the affected land regraded and revegetated in accordance with the requirements of Sections 816.24, 816.25, 816.101, and 816.111–816.117. At the time diversions are removed, downstream water treatment facilities previously protected by the diversion shall be modified or removed to prevent overtopping or failure of the facilities. In no case shall this requirement relieve the person who conducts the surface mining activities from maintenance of the treatment facility if otherwise required under this Part or the permit.

§ 816.45 Hydrologic balance: Sediment control measures.

Appropriate sediment control measures shall be designed, constructed, and maintained to prevent additional contributions of sediment to streamflow or to runoff outside the permit area and to minimize erosion to the extent possible using the best technology currently available. Sediment control measures include practices carried out within and adjacent to the disturbed area. The sedimentation storage capacity of practices in and downstream from the disturbed area shall reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of

proper mining and reclamation methods and sediment control practices, singly or in combination. Sediment control methods include but are not limited to—

(a) Disturbing the smallest practicable area at any one time during the mining operation through progressive backfilling, grading, and timely revegetation;

(b) Shaping the backfill material to promote a reduction in the rate and volume of runoff, in accordance with the requirements of Section 816.101;

(c) Retaining sediment within disturbed areas;

(d) Diverting runoff away from disturbed areas;

(e) Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;

(f) Using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds, and other measures that reduce overland flow velocity, reduce runoff volume, or trap sediment;

(g) Building and maintaining sedimentation ponds; and

(h) Treating with chemicals.

§ 816.46 Hydrologic balance: Sedimentation ponds.

(a) *General requirements.* Sedimentation ponds shall be used individually or in series and shall—

(1) Be constructed before any disturbance of the disturbed area to be drained into the pond;

(2) Be located as near as possible to the disturbed area and out of perennial streams; and

(3) Meet all the criteria of this Section.

(b) *Sediment storage volume.* Sedimentation ponds shall provide a sediment storage volume equal to—

(1) The accumulated sediment volume from the drainage area to the pond for a minimum of 3 years. Sediment storage volume shall be determined using the Universal Soil Loss Equation, gully erosion rates, and sediment delivery ratio converted to sediment volume using the sediment density, or other empirical methods established by the regulatory authority and based upon actual sedimentation pond studies; or

(2) 0.1 acre-foot for each acre of disturbed area within the upstream drainage area or a greater amount based upon sediment yield to the pond if required by the regulatory authority. The regulatory authority may approve a sediment storage volume of no less than .035 acre-foot for each acre of disturbed area within the upstream drainage area if the person who conducts the surface mining activities demonstrates that sediment removed by other sediment control measures is equal to the reduction in sediment storage volume.

(c) *Detention time.* Sedimentation ponds shall provide a 24 hour theoretical detention time for the water inflow or runoff entering the pond from a 10 year 24-hour precipitation event. Runoff diverted in accordance with Sections 816.43 and 816.44, away from the disturbed drainage areas and not passed through the sedimentation pond need not be considered in sedimentation pond design. In determining the runoff volume, the characteristics of the mine site, reclamation procedures, and onsite sediment control practices shall be considered.

(1) The regulatory authority may approve a theoretical detention time of not less than 10 hours, when the person who conducts the surface mining activities demonstrates that—

(i) The improvement in sediment removal efficiency is equivalent to the reduction in detention time as a result of pond design. Improvements in pond design may include but are not limited to pond configuration, in-flow and outflow facility locations, baffles to decrease in-flow velocity and short-circuiting, and surface areas; and

(ii) The pond effluent is shown to achieve and maintain applicable effluent limitations.

(2) The regulatory authority may approve a theoretical detention time of not less than 10 hours when the person who conducts the surface mining activities demonstrates that the size distribution or the specific gravity of the suspended matter is such that applicable effluent limitations are achieved and maintained.

(3) The regulatory authority may approve a theoretical detention time of less than 24 hours to any level of detention time when the person who conducts the surface mining activities demonstrates to the regulatory authority that the chemical treatment process to be used—

(i) Will achieve and maintain the effluent limitations;

(ii) Is harmless to fish, wildlife and related environmental values;

(iii) Is planned under the supervision of a registered professional engineer; and

(iv) Shall be operated by a qualified person approved by the regulatory authority.

(4) The calculated theoretical detention time and all supporting documentation and drawings used to establish the required detention times under paragraphs (c)(1)-(3) of this section shall be included in the permit application.

(d) *Dewatering.* The water storage resulting from inflow shall be removed by a nonclogging dewatering device or a spillway approved by the regulatory authority, and shall have a discharge rate to achieve and maintain the required theoretical detention time. The dewatering device shall not be located at a lower elevation than the maximum elevation of the design sedimentation storage volume.

(e) Each person who conducts surface mining activities shall design, construct, and maintain sedimentation ponds to prevent short-circuiting.

(f) The design, construction, and maintenance of a sedimentation pond or other sediment control measures in accordance with this Section shall not relieve the person from compliance with applicable effluent limitations.

(g) There shall be no out-flow through the emergency spillway during the passage of the runoff resulting from the 10 year 24-hour precipitation event through the sedimentation pond.

(h) Sediment shall be removed from sedimentation ponds when the volume of sediment accumulates to 60 percent of the required sediment storage volume. With the approval of the regulatory authority, additional permanent water storage may be provided above that required for sediment storage if the person who conducts the surface mining activities demonstrates that applicable effluent limitations will be achieved and maintained. Upon the approval of the regulatory authority for those cases where additional permanent water storage is provided above that required for sediment under paragraph (b) of this Section, sediment removal may be delayed until the remaining volume of permanent storage has decreased to 40 percent of the required sediment storage provided the theoretical detention time is maintained.

(i) An appropriate combination of principal and emergency spillways shall be provided to discharge safely the runoff from a 25-year 24-hour precipitation event, or larger event as specified by the regulatory authority. The elevation of the crest of the emergency spillway shall be a minimum of 1.0 foot above the crest of the principal spillway. Emergency spillway grades and allowable velocities shall be as specified by the regulatory authority.

(j) The minimum elevation at the top of the settled embankment shall be 1.0 foot above the water surface in the reservoir with the emergency spillway flowing at design depth.

(k) The constructed height of the dam shall be increased a minimum of 5 percent over the design height to allow for settlement unless it has been demonstrated to the regulatory authority that the material used and the design will ensure against all settlement.

(l) The minimum top width of the embankment shall not be less than the

quotient of $(H+35)/5$ where H is the height of the embankment as measured from the upstream toe of the embankment.

(m) The upstream and downstream side slopes of the settled embankment shall not be less than $1v:5h$ with neither slope steeper than $1v:2h$. Slopes shall be designed to be stable in all cases, even if flatter side slopes are required.

(n) The embankment foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than $1v:1h$, and the entire foundation surface scarified.

(o) The fill material shall be free of sod, large roots, other large vegetative matter, and frozen soil, and in no case shall coal-processing waste be used.

(p) The placing and spreading of fill material shall be started at the lowest point of the foundation and the fill brought up in horizontal layers of such thickness as required by the regulatory authority to facilitate compaction. Compaction shall be conducted as specified by the regulatory authority in order to achieve stability.

(q) If a sedimentation pond has an embankment that is more than 20 feet in height, as measured from the upstream toe of the embankment to the crest of the emergency spillway, or has a storage volume of 20 acre-feet or more, the following additional requirements shall be met:

(1) An appropriate combination of principal and emergency spillways shall be provided to safely discharge the runoff resulting from a 100-year 24-hour precipitation event, or a larger event if specified by the regulatory authority.

(2) The embankment shall be designed and constructed with a static safety factor of at least 1.5 or such higher safety factor as designated by the regulatory authority to ensure stability.

(3) Appropriate barriers shall be provided to control seepage along conduits that extend through the embankment.

(r) Each pond shall be designed and inspected during construction under the supervision of, and certified after construction by, a registered professional engineer.

(s) The entire embankment including the surrounding areas disturbed by construction shall be graded, fertilized, seeded, and mulched in accordance with Sections 816.111–816.117 immediately after the embankment is completed, provided that the active, upstream face of the embankment where water will be impounded may be riprapped or otherwise stabilized. Areas in which the vegetation is not successful or where rills and gullies develop shall be repaired and revegetated in accordance with Sections 816.106 and 816.111–816.117.

(t) All ponds, including those not meeting the size or other criteria of 30 CFR 77.216(a), shall be examined for structural weakness, erosion, and other hazardous conditions in accordance with the inspection requirements contained in 30 CFR 77.216-3. Each person who conducts surface mining activities shall deliver to the regulatory authority any report or notification required under 30 CFR 77.216-3 whether or not the pond meets the criteria of 30 CFR 77.216(a).

(u) Each sedimentation pond shall be removed and the affected land regraded and revegetated in accordance with Sections 816.101, 816.102, and 816.111–816.117, unless approved by the regulatory authority for retention as being compatible with the approved postmining land use. If the regulatory authority approves retention, the sedimentation pond shall meet all the requirements for permanent impoundments in Section 816.49.

§ 816.47 Hydrologic balance: Discharge structures.

Discharges from sedimentation ponds and diversions shall be controlled, using energy dissipators, surge ponds, riprap channels, and other devices where necessary, to reduce erosion and prevent deepening or enlargement of stream channels and to minimize disturbances to the hydrologic balance. Discharge structures shall be designed according to standard engineering design procedures.

§ 816.48 Hydrologic balance: Acid-forming and toxic-forming spoil.

Drainage from acid-forming and toxic-forming spoil into ground and surface water shall be avoided by—

(a) Identifying, burying, and treating where necessary, spoil which, in the judgment of the regulatory authority, may be detrimental to vegetation or that may adversely affect water quality if not treated or buried. This material shall be buried, treated, or disposed of in accordance with the provisions of paragraph (c) of this Section;

(b) Preventing water from coming into contact with acid-forming and toxic-forming spoil in accordance with Section 816.103, or such other measures as the regulatory authority may require; and

(c) Burying or otherwise treating all acid-forming or toxic-forming spoil within 30 days after it is first exposed on the mine site, or within a lesser period if required by the regulatory authority. Temporary storage of the spoil may be approved by the regulatory authority upon a finding that burial or treatment within 30 days is not feasible and that storage will not result in any material risk of water pollution or other environmental damage. If storage is approved it shall be limited to the period until burial or treatment first becomes feasible. Stored acid-forming or toxic-forming spoil shall be placed on impermeable material and protected from erosion and contact with surface water.

§ 816.49 Hydrologic balance: Permanent and temporary impoundments.

(a) Permanent impoundments are prohibited unless authorized by the regulatory authority. Each person who conducts surface mining activities shall demonstrate to the regulatory authority that each permanent impoundment meets the following requirements:

(1) The quality of the impounded water is suitable on a permanent basis for its intended use and discharges from the impoundment will not degrade the quality of receiving waters below the water quality standards under applicable State and Federal law.

(2) The level of water will be adequately stable so as to support the intended use.

(3) Adequate safety and access to the impounded water will be provided for proposed water users.

(4) Water impoundments will not result in the diminution of the quality or quantity of water used by adjacent or surrounding landowners for agricultural, industrial, recreational or domestic uses.

(5) The impoundment dam construction plan and maintenance program shall be designed to achieve stability with an adequate factor of safety compatible with that of structures constructed and maintained under 16 U.S.C. 1006 Pub. L. 83-566 Standards for structures built under this law are contained in the Soil Conservation Service Practice Standard 378, "Ponds," and Technical Release No. 60, "Earth Dams and Reservoirs," and are hereby incorporated by reference. These standards are available in all OSM offices. These materials are incorporated as they exist on the adoption of this Part, and notices of changes in these materials will be published periodically in the FEDERAL REGISTER.

(6) The size of the impoundment is adequate for its intended purposes.

(7) The impoundment will be suitable for the approved post-mining land use.

(b) Temporary impoundments of water in which the water is impounded by a dam shall meet the requirements of Section 816.46 (e)-(u).

§ 816.50 Hydrologic balance: Ground water protection.

(a) Backfilled materials shall be placed so as to minimize contamination of ground water systems with acid, toxic, or otherwise harmful mine drainage, to minimize adverse off-site, effects of mining on ground water systems, and to support approved post-mining land uses.

(b) To control the effects of mine drainage, pits, cuts, and other mine excavation or disturbances shall be located, designed, constructed, and utilized in such manner as to prevent or control discharge of acid, toxic, or otherwise harmful mine drainage waters into ground water systems and to prevent adverse impacts on such ground water systems or on approved post-mining land uses.

(c) The regulatory authority may require physical, chemical and mineralogical and chemical analyses of proposed backfill materials, spoil, aquifers, overburden, mine waters, surface waters, ground waters, or other materials.

§ 816.51 Hydrologic balance: Protection of ground water recharge capacity.

Surface mining activities shall be conducted in a manner that facilitates reclamation which will restore approximate pre-mining recharge capacity through restoration of the capability of the reclaimed areas as a whole, excluding coal processing waste and refuse disposal areas and fills, to transmit water to the ground water system. The recharge capacity shall be restored to a condition which—

(a) Supports the approved post-mining land use;

(b) Minimizes disturbances to the prevailing hydrologic balance in the permit area and in adjacent areas; and

(c) Provides a rate of recharge at least equal to the pre-mining recharge rate.

§ 816.52 Hydrologic balance: Surface and ground water monitoring.

(a) *Ground water.*

(1) Ground water levels, infiltration rates, subsurface flow and storage characteristics, and the quality of ground water shall be monitored in the manner required by the regulatory authority to determine the effects of surface mining activities on the recharge capacity of reclaimed lands and on the quantity and quality of water in ground water systems at the mine-site and in adjacent areas.

(2) When operations may affect the ground water system, ground water levels and ground water quality shall be periodically monitored using measurements from a sufficient number of wells and mineralogical and chemical analyses of aquifer, overburden, and spoil material adequate to reflect changes in ground water quantity and quality resulting from these operations. The monitoring shall be adequate to plan for modification of surface mining activities if necessary to minimize disturbance of the hydrologic balance.

(3) As specified and approved by the regulatory authority, the person who conducts surface mining activities shall conduct additional hydrologic tests, including drilling, infiltration tests, and aquifer tests and the results shall be submitted to the regulatory authority to demonstrate compliance with Section 816.51.

(b) *Surface water.*

(1) Surface water monitoring shall be conducted in accordance with the monitoring program submitted under 30 CFR 780.21 (b)(4) and approved by the regulatory authority. Monitoring shall—

(i) Be adequate to measure accurately and record water quantity and quality of the discharges from the permit area;

(ii) In all cases in which analytical results of the sample collections indicate a violation of a permit condition or applicable standard has occured, result in the operator notifying the regulatory authority immediately. Where a National Pollutant Discharge Elimination System (NPDES) permit effluent limitation has been violated, the person who conducts the surface mining activities shall forward a copy of the Discharge Monitoring Report, EPA Form 3320-1, concurrently with notification of the violation;

(iii) Result in regular reports of all samples to the regulatory authority within 60 days of the end of each 60 day sample collection period; or

(iv) If the discharge for which water monitoring reports are required, is subject to regulation by a National Pollutant Discharge Elimination System (NPDES) permit issued under the Clean Water Act of 1977 (30 U.S.C. 1251-1378) which includes equivalent reporting requirements and requires filing of the water monitoring reports within 90 days or less of sample collection, the person who conducts the surface mining activities shall submit to the regulatory authority on the same time schedule as required by the NPDES permit or within 90 days following sample collection, whichever is earlier, either—

(A) A copy of the completed reporting form filed to meet NPDES permit requirements; or

(B) A letter identifying the State or Federal government official with whom the reporting form was filed to meet NPDES permit requirements and the date of filing.

(2) After disturbed areas have been regraded and stabilized according to this Part, the person who conducts surface mining activities shall monitor surface water flow and quality. Data from this monitoring shall be used to demonstrate that the quality and quantity of runoff without treatment is consistent with the requirement of this Section to minimize disturbance to the prevailing hydrologic balance and with the requirements of this Part to attain the approved post-mining land use. These data shall provide a basis for approval by the regulatory authority for removal of water quality or flow control systems and for determining when the requirements of this Section are met. The regulatory authority shall determine the nature of data, frequency of collection, and reporting requirements.

(3) Equipment, structures, and other devices necessary to measure and sample accurately the quality and quantity of surface water discharges from the affected area shall be properly installed, maintained, and operated and shall be removed when no longer required.

§ 816.53 Hydrologic balance: Transfer of wells.

(a) An exploratory or monitoring well may only be transferred for further use as a water well with the prior approval of the regulatory authority. The surface owner shall submit a written request to the regulatory authority for approval of any well transfer.

(b) Upon an approved transfer of a well, the transferee shall—

(1) Assume primary liability for damages to persons or property from the well;

(2) Plug the well when necessary, but in no case later than abandonment of the well; and

(3) Assume primary responsibility for compliance with Sections 816.13-816.15 with respect to the well.

(c) Upon an approved transfer of a well, the transferor shall—

(1) Be secondarily liable for damages;

(2) Be secondarily liable for plugging the well; and

(3) Be secondarily liable for compliance with Section 816.13-816.15 with respect to the well.

(d) Nothing in this Section shall be deemed to supersede or affect the applicability of any State law requirements with respect to a well transfer.

§ 816.54 Hydrologic balance: Water rights and replacement.

Any person who conducts surface mining activities shall replace the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where the water supply has been affected by contamination,

diminution, or interruption resulting from the surface coal mining activities.

§ 816.55 Hydrologic balance: Discharge of water into an underground mine.

Surface water shall not be diverted into underground mine workings unless the person who conducts the surface mining activities demonstrates to the satisfaction of the regulatory authority that the diversion will—

(a) Abate water pollution or otherwise eliminate public hazards resulting from underground mining; and

(b) Be discharged as a controlled flow meeting the water quality requirements of Section 816.52 for pH and total suspended solids except that the total suspended solid concentrations may be exceeded only if the suspended material is approved by the regulatory authority or is limited to—

(1) Coal processing waste;

(2) Fly ash from a coal-fired facility;

(3) Sludge from acid drainage treatment facility;

(4) Flue gas desulfurization sludge;

(5) Inert materials used for stabilizing underground mines or;

(c) Underground mine development wastes; and

(7) The discharge will not cause, result in or contribute to a violation of applicable water quality standards; and

(d) Minimize disturbance to the hydrologic balance.

§ 816.56 Hydrologic balance: Post-mining rehabilitation of sedimentation ponds, diversions, impoundments, and treatment facilities.

Before abandoning the permit area, the person who conducts the surface mining activities shall restore all permanent sedimentation ponds, diversions, impoundments, and treatment facilities to meet the original design criteria for the permanent structures and impoundments.

§ 816.57 Hydrologic balance: Stream buffer zones.

(a) No land within 100 feet of a perennial stream or a stream with a macro-invertebrate biological community shall be disturbed by surface mining activities except in accordance with Section 816.44 unless the regulatory authority specifically authorizes surface mining activities closer to or through such a stream upon finding—

(1) That the original stream channel will be restored; and

(2) During and after the mining, the water quantity and quality from the stream section within 100 feet of the surface mining activities shall not be adversely affected.

(b) The area not to be disturbed shall be designated a buffer zone and marked as specified in Section 816.11.

§ 816.59 Coal recovery.

Surface mining activities shall be conducted so as to maximize the utilization and conservation of the coal so that reaffecting the land in the future through surface coal mining operations is minimized.

§ 816.61 Use of explosives: General requirements.

(a) Each person who conducts surface mining activities shall comply with all applicable local, State, and Federal laws and regulations and the requirements of Sections 816.61-816.68 in the storage, handling, preparation, and use of explosives.

(b) Blasting operations that use more than the equivalent of 5 pounds of TNT shall be conducted according to a time schedule approved by the regulatory authority.

(c) All blasting operations shall be conducted by experienced, trained, and competent persons who understand the hazards involved. Each person responsible for blasting operations shall—

(1) Have demonstrated a knowledge of, and shall comply with, MSHA safety requirements and U.S. Department of Treasury security requirements;

(2) Be capable of using mature judgment in all situations;

(3) Be in good physical condition and not addicted to intoxicants, narcotics, or other similar types of drugs;

(4) Possess current knowledge of the local, State, and Federal laws and regulations applicable to the work; and

(5) Possess a valid certificate of completion of training and qualification as required by 30 CFR 850 and 851.

§ 816.62 Use of explosives: Pre-blasting survey.

(a) On the request to the regulatory authority by a resident or owner of a man-made dwelling or structure that is located within one-half mile of any part of the permit area, the person who conducts the surface mining activities shall conduct a pre-blasting survey of the dwelling or structure and submit a report of the survey to the regulatory authority and to the person requesting the survey.

(b) Each person who conducts surface mining activities shall utilize personnel approved by the regulatory authority to conduct the survey to determine the condition of the dwelling or structure and to document any pre-blasting damage and other physical factors that could reasonably be affected by the blasting. Assessments of structures such as pipes, cables, transmission lines, and wells and other water systems shall be limited to surface condition and readily available data. Special attention shall be given to the pre-blasting condition of wells and other water systems used for human, animal, or agricultural purposes and to the quantity and quality of the water.

(c) A written report of the survey shall be prepared and signed by the person who conducted the survey. The report shall include recommendations of any special conditions or proposed adjustments to the blasting procedure which should be incorporated into the blasting plan to prevent damage. Copies of the report shall be provided to the person requesting the survey and to the regulatory authority.

§ 816.64 Use of explosives: Public notice of blasting schedule.

(a) *Blasting schedule publication.* (1) Each person who conducts surface mining activities shall publish a blasting schedule at least 10 days, but not more than 20 days, before beginning a blasting program in which explosives that use more than the equivalent of 5 pounds of TNT are detonated. The blasting schedule shall be published in a newspaper of general circulation in the locality of the blasting site.

(2) Copies of the schedule shall be distributed by mail to local governments and public utilities and by mail or delivered to each residence within one-half mile of the permit area described in the schedule. Copies sent to residences shall be accompanied by information advising the owner or resident how to request a pre-blasting survey.

(3) The person who conducts the surface mining activities shall republish and redistribute the schedule by mail at least every 3 months.

(b) *Blasting schedule contents.* (1) A blasting schedule shall not be so general as to cover all working hours but shall identify as accurately as possible the location of the blasting sites and the time periods when blasting will occur.

(2) The blasting schedule shall contain at a minimum—

(i) Identification of the specific areas in which blasting will take place. Each specific blasting area described shall be reasonably compact and not larger than 300 acres;

(ii) Dates and time periods when explosives are to be detonated. That such periods shall not exceed an aggregate of 4 hours in any one day;

(iii) Methods to be used to control access to the blasting area;

(iv) Types of audible warnings and all-clear signals to be used before and after blasting; and

(v) A description of emergency situations referred to in Section 816.65(a)(2) which have been approved by the regulatory authority for blasting at times other than those described in the schedule.

(c) *Public notice of changes to blasting schedules.* Before blasting in areas or at times not in a previous schedule, the person who conducts the surface mining activities shall prepare a revised blasting schedule according to the procedures in paragraphs (a) and (b) of this Section.

§ 816.65 Use of explosives: Surface blasting requirements.

(a) All blasting shall be conducted between sunrise and sunset. The regulatory authority may specify more restrictive time periods based on public requests or other considerations including the proximity to residential areas.

(b) Blasting shall be conducted at times announced in the blasting schedule, except in those emergency situations approved by the regulatory authority where rain, lightning, other atmospheric conditions, or operator or public safety require unscheduled detonation.

(c) Warning and all-clear signals of different character that are audible within a range of one-half mile from the point of the blast shall be given. Each person within the permit area and each person who resides or regularly works within one-half mile of the permit area shall be notified of the meaning of the signals through appropriate instructions. These instructions shall be periodically delivered or otherwise communicated in a manner which can be reasonably expected to inform such persons of the meaning of the signals. Each person who conducts surface mining activities shall maintain signs in accordance with Section 816.11(f).

(d) Access to the blasting area shall be regulated to protect the public and livestock from the effects of blasting. Access to the blasting area shall be controlled to prevent unauthorized entry at least 10 minutes before each blast and until an authorized representative of the person who conducts the surface mining activities has reasonably determined—

(1) That no unusual circumstances, such as imminent slides or undetonated charges, exist; and

(2) That access to and travel in or through the area can safely resume.

(e) Areas in which charged holes are awaiting firing shall be guarded, barricaded and either posted or flagged against unauthorized entry.

(f)(1) Airblast shall be controlled so that it does not exceed the values specified below at any dwelling, public building, school, church, or commercial or institutional building, unless such building is owned by the person who conducts the surface mining activities, is not leased to any other person and is located within the permit area:

Lower frequency limit of measuring system, Hz (+3dB)	Maximum level in dB
0.1 Hz or lower—flat response	135peak.
2 Hz or lower—flat response	132 peak.
6Hz or lower—flat response	130 peak.
C=weighted, slow response	109 C.

(2) In all cases except the C-weighted slow, the systems used shall have a flat frequency response of at least 500 Hz at the upper end. The C-weighted shall meet the standard American National Standards Institute (ANSI) S1.4-1971 specifications. The ANSI S1.4-1971 is hereby incorporated by reference. This work is incorporated as it exists on the date of adoption of this Part, and notice of changes made in these materials will periodically be published in the FEDERAL REGISTER. ANSI S1.4-1971 is available for inspection in OSM regional offices and in OSM's office in the Department of Interior, 18th and C Streets, N.W., Washington, D.C. 20240.

(3) The person who conducts blasting may satisfy the provisions of this Section by meeting any of the four specifications in the chart in paragraph (f)(1) of this Section.

(g) Except where lesser distances are approved by the regulatory authority, based upon a pre-blasting survey or other appropriate investigation, blasting shall not be conducted within—

(1) 1,000 feet of any building used as a dwelling, school, church, hospital, or nursing facility;

(2) 500 feet of facilities including, but not limited to, disposal wells, petroleum or gas-storage facilities, municipal water-storage facilities, fluid-transmission pipelines, gas or oil-collection lines, or water and sewage lines; and

(3) 500 feet of the active workings of an underground mine except with the concurrence of the Mine Safety and Health Administration.

(h) Flyrock from blasting shall be restricted as follows:

(1) No flyrock shall be cast beyond the line of property owned or leased by the person who conducts the surface mining activities without the consent of the landowners of adjacent areas.

(2) No flyrock shall be cast more than half the distance from the blast to the nearest dwelling, public building, school, church, commercial or institutional building, road or railroad. This shall not apply to any structure or right-of-way on land owned by the person who conducts the surface mining activities and not leased to any other person.

(3) No flyrock shall be cast beyond the area of regulated access required under paragraph (d) of this Section.

(4) These restrictions shall apply to material which travels along the ground surface as well as that which travels through the air.

(i) Blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in the course, channel, or availability of ground or surface waters outside the permit area.

(j) In all blasting operations, except as otherwise authorized in this Section, the maximum peak particle velocity shall not exceed 1 inch per second at the location of any dwelling, public building, school, church, or commercial or institutional building. The regulatory authority may reduce the maximum peak particle velocity allowed if it determines that a lower standard is required because of density of population or land use, age or type of structure, geology or hydrology of the area, frequency of blasts, or other factors.

(k) The maximum peak particle velocity does not apply to property within the permit area that is owned by the person who conducts the surface mining activities and is not leased to any other person.

(l) An equation for determining the maximum weight of explosives that can be detonated within any 8-millisecond period is in paragraph (m) of this Section. If the blasting is conducted in accordance with this equation, the velocity is deemed to be within the 1-inch-per-second limit.

(m) (1) The maximum weight of explosives to be detonated within any 8 millisecond period may be determined by the formula $W = (D/60)^2$ where W = the maximum weight of explosives, in pounds, that can be detonated in any 8-millisecond period, and D = the distance, in feet, to the nearest dwelling, school, church, or commercial or institutional building.

(2) For distances between 300 and 5,000 feet, solution of the equation results in the following maximum weight:

Distance, in feet (D)	Maximum weight in pounds (W)
300	25
350	34
400	44
500	69
600	100
700	136
800	178
900	225
1,000	278
1,100	336
1,200	400
1,300	469
1,400	544
1,500	625
1,600	711
1,700	803
1,800	900
1,900	1,002
2,000	1,111

Distance, in feet (D)	Maximum weight in pounds (W)
2,500	1,736
3,000	2,500
3,500	3,403
4,000	4,444
4,500	5,625
5,000	6,944

(n) If on a particular site the peak particle velocity exceeds one-half inch per second after a period of 1 second following the maximum ground particle velocity, the blasting procedures shall be revised to limit the ground motion.

(o) Electric or non-electric delay systems combining surface delays with in-hole delays may be used to reduce vibrations if approved by the regulatory authority. Requests to use such systems shall be accompanied by blasting reports and seismograph records of test blasting on the site showing that the delay pattern does not produce peak particle velocities in violation of this Section.

§ 816.67 Use of explosives: Seismographic measurements.

(a) Where a seismograph is used to monitor the velocity of ground motion and the peak particle velocity limit of 1 inch per second is not exceeded, the equation in Section 816.66(m) need not be used. If the equation is not being used, a seismograph record shall be obtained for each shot.

(b) The use of a modified equation to determine maximum weight of explosives for blasting operations at a particular site may be approved by the regulatory authority on receipt of a petition accompanied by reports including seismograph records of test blasting on the site. In no case shall the regulatory authority approve the use of a modified equation where the peak particle velocity of 1 inch per second required in Section 816.66(j) would be exceeded.

(c) The regulatory authority may require a seismograph record of any or all blasts.

§ 816.68 Use of explosives: Records of blasting operations.

A record of each blast, including seismograph reports, shall be retained for at least 3 years and shall be available for inspection by the regulatory authority and the public on request. The record shall contain the following data:

(a) Name of the person conducting the blast.

(b) Location, date, and time of blast.

(c) Name, signature, and license number of blaster-in-charge.

(d) Direction and distance, in feet, to the nearest dwelling, school, church, or commercial or insitutional building either—

(1) Not located in the permit area; or

(2) Not owned nor leased by the person who conducts the surface mining activities.

(e) Weather conditions.

(f) Type of material blasted.

(g) Number of holes, burden, and spacing.

(h) Diameter and depth of holes.

(i) Types of explosives used.

(j) Total weight of explosives used.

(k) Maximum weight of explosives detonated within any 8 millisecond period.

(l) Maximum number of holes detonated within any 8 millisecond period.

(m) Methods of firing and type of circuit.

(n) Type and length of stemming.

(o) Mats or other protections used.

(p) Type of delay detonator and delay periods used.

(q) Seismographic records, where required, including the calibration signal of the gain setting and—

(1) Seismographic reading, including exact location of seismograph and its distance from the blast;

(2) Name of the person taking the seismograph reading; and

(3) Name of the person and firm analyzing the seismographic record.

§ 816.71 Disposal of excess spoil: General requirements.

(a) Spoil not required to achieve the approximate original contour shall be hauled or conveyed to and placed in designated disposal areas within a permit area other than mine working or excavations, only if the disposal areas are authorized for such purposes in the approved mining and reclamation permit and only in accordance with Sections 816.71-816.73. The spoil shall be placed in a controlled manner to ensure—

(1) That leachate and surface runoff will not degrade surface or ground waters or exceed the effluent limitations of Section 816.42;

(2) Stability of the fill; and

(3) That the land mass is suitable for reclamation and revegetation compatible with the natural surroundings.

(b) The fill shall be designed using recognized professional standards, certified by a registered professional engineer, and approved by the regulatory authority.

(c) All vegetative and organic materials shall be removed from the disposal area and the topsoil shall be removed, segregated, and replaced under Sections 816.21-816.23 before spoil is placed in the disposal area. If approved by the regulatory authority, organic material may be used as mulch or may be included in the topsoil to control erosion, to promote growth of vegetation, or to increase the moisture retention of the soil.

(d) Slope protection shall be provided to minimize surface erosion at the site. All disturbed areas including diversion ditches that are not riprapped shall be vegetated upon completion of construction.

(e) The disposal areas shall be located on the most moderately sloping and naturally stable areas available as approved by the regulatory authority. If such placement provides additional stability and prevents mass movement, fill materials suitable for disposal shall be placed upon or above a natural terrace, bench, or berm.

(f) The spoil shall be hauled or conveyed and placed in a controlled manner, concurrently compacted as necessary to ensure mass stability and prevent mass movement, covered, and graded to allow surface and subsurface drainage to be compatible with the natural surroundings, to ensure long-term stability.

(g) The final configuration of the fill must be suitable for postmining land uses approved in accordance with Section 816.124 except that no depressions or impoundments shall be allowed on the completed fill.

(h) Terraces shall not be constructed unless approved by the regulatory authority.

(i) Where the slope in the disposal area exceeds $1v{:}2.8h$ (36 percent), or such lesser slope as may be designated by the regulatory authority based on local conditions, keyway cuts (excavations to stable bedrock), or rock toe buttresses shall be constructed to stabilize the fill. The slope of original ground at the toe of the fill shall not exceed $1v{:}5h$ (20 percent).

(j) The fill shall be inspected for stability by a registered engineer or other professional specialist approved by the regulatory authority during critical construction periods and at least quarterly throughout construction to ensure removal of all organic material and topsoil, placement of underdrainage systems, proper installation of surface drainage systems, proper placement and compaction of fill materials, and proper revegetation. The registered engineer or other qualified professional specialist shall provide to the regulatory authority a certified report within 2 weeks after each inspection that the fill has been constructed as specified in the design approved by the regulatory authority, and a copy of the report shall be retained at the minesite by the person who conducts the surface mining activities.

(k) (1) Coal processing wastes shall not be disposed of in head-of-hollow fills, and may only be disposed of in other excess spoil fills if such waste is—

(i) Placed in accordance with section 816.85;

(ii) Demonstrated to be nontoxic and nonacid forming; and

(iii) Demonstrated to be consistent with the design stability of the fill.

(2) Wastes other than coal processing wastes shall be disposed of in accordance with section 816.89.

(l) The disposal area shall not contain springs, natural watercourses, or wet-weather seeps unless lateral drains are constructed from the wet areas to the underdrains in a manner that prevents infiltration of the water into the spoil pile.

(m) If any portion of the fill interrupts, obstructs, or encroaches upon any natural drainage channel, the entire fill is classified as a valley or head-of-hollow fill and must be designed and constructed in accordance with the requirements of sections 816.72 and 816.73, respectively.

(n) The foundation and abutments of the fill shall be stable under all conditions of construction and operation. Sufficient foundation investigation and laboratory testing of foundation materials shall be performed in order to determine the design requirements for stability of the foundation. Analyses of foundation conditions shall include the effect of underground mine workings, if any, upon the stability of the structure.

* * * * *

(q) Excess spoil may be returned to underground workings only in accordance with a spoil disposal program approved by the regulatory authority under 30 CFR 784.14.

§ 816.72 Disposal of excess spoil: Valley fills.

Valley fills shall meet all of the requirements of section 816.71 and the additional requirements of this section.

(a) The fill shall be designed to attain a long-term static factor of safety of 1.5 based upon data obtained from subsurface exploration, geotechnical testing, foundation design, and accepted engineering analyses.

(b) A subdrainage system for the fill shall be constructed in accordance with the following:

(1) A system of underdrains constructed of durable rock shall—

(i) Be installed along the natural drainage system;

(ii) Extend from the toe to the head of the fill; and

(iii) Contain lateral drains to each area of potential drainage or seepage.

(2) A filter system to insure the proper functioning of the rock underdrain system shall be designed and constructed using standard geotechnical engineering.

(3) In constructing the underdrains, no more than 10 percent of the rock may be less than 12 inches in size and no single rock may be larger than 25 percent of the width of the drain. Rock used in underdrains shall meet the requirements of paragraph (a)(5) of this section. The minimum size of the main underdrain shall be:

Total amount of fill material	Predominant type of fill material	Minimum size of drain, in feet	
		Width	Height
Less than 1,000,000 yd³.	Sandstone	10	4
Do.	Shale	16	8
More than 1,000,000 yd³.	Sandstone	16	8
Do.	Shale	16	

(5) Rock used shall not have less than 50 percent wear in 500 revolutions in the Los Angeles Rattler Test (AASHTO T-96-70), shall not have less than 15-percent weight loss in 5 cycles of the Sodium Sulfate Test (ASTM C088, AASHTO T-1-4), and shall not contain less than 30 percent by volume of clay or clay minerals as determined by standard petrologic analytical tests, and shall not be acid-forming or toxic-forming.

(c) (1) Spoil shall be hauled or conveyed and placed in a controlled manner and concurrently compacted as specified by the regulatory authority in lifts no thicker than 18 inches in order to—

(i) Achieve the densities designed to ensure mass stability;

(ii) Prevent mass movement;

(iii) Avoid contamination of the rock underdrain or rock core; and

(iv) Prevent formation of voids.

(2) The person who conducts the surface mining activities may use lifts of greater thickness than required under paragraph (c)(1) of this section if he has demonstrated to the regulatory authority by density monitoring tests that the density throughout the thickness of the lift is equal to or greater than the density specified in the design referred to in paragraph (a) of this section, except that in no event shall lift thickness exceed 4 feet.

(d) Surface water runoff from the area above the fill shall be diverted away from the fill and into stabilized diversion channels designed to pass safely the runoff from the 24-hour duration 100-year frequency storm or larger event specified by the regulatory authority. Sediment control structures shall be provided at the discharge of the diversion ditch before entry into the natural watercourse in accordance with section 816.46. Surface runoff from the fill surface shall be diverted to stabilized channels off the fill which will safely pass runoff from a 24-hour duration, 100-year frequency storm. Diversion design shall comply with the requirements of section 816.43(f).

(e) The tops of the fill and any terrace constructed to stabilize the face shall be graded no steeper than 1*v*:20*h* (5 percent). The vertical distance between terraces shall not exceed 50 feet.

(f) Drainage shall not be directed over the outslope of the fill.

(g) The outslope of the fill shall not exceed 1*v*:2*h* (50 percent). The regulatory authority may require a flatter slope.

§ 816.73 Disposal of excess spoil: Head-of-hollow fills.

Disposal of spoil in the head-of-hollow fill shall meet all standards set forth in sections 816.71 and 816.72 and the additional requirements of this section.

(a) The fill shall be designed to completely fill the disposal site approved by the regulatory authority to the approximate elevation of the ridgeline. A rock-core chimney drain may be utilized instead of the subdrain and surface diversion system required for valley fills. If the crest of the fill is not approximately at the same elevation as the low point of the adjacent ridgeline, the fill must be designed as specified in section 816.72, with diversion of runoff around the fill.

(b) The alternative rock-core chimney drain system shall be designed and incorporated into the construction of head-of-hollow fills as follows:

(1) The fill shall have along the vertical projection of the main buried stream channel or rill a vertical core of durable rock at least 16 feet thick which shall extend from the toe of the fill to the head of the fill and from the base of the fill to the surface of the fill. A system of lateral rock underdrains shall connect this rock core to each area of potential drainage or seepage in the disposal area. Rocks used in the rock core and underdrains shall meet the requirements of section 816.72(b).

(2) A filter system to ensure the proper functioning of the rock core shall be designed and constructed using standard geotechnical engineering methods.

(3) The grading may drain surface water away from the outslope of the fill and toward the rock core. The maximum slope of the top of the fill shall be 1*v*:33*h* (3 percent). Instead of the requirements of section 816.71(g), a drainage pocket may be maintained at the head of the fill during and after construction to intercept surface runoff and discharge the runoff through or over the rock drain if stability of the fill is not impaired. In no case shall this pocket or sump have a potential for impounding more than 10,000 cubic feet of water. Terraces on the fill shall be graded with a 3- to 5-

percent grade toward the fill and a 1-percent slope toward the rock core.

(c) The drainage control system shall be capable of safely passing the runoff from a 24-hour 100-year storm, or larger event, as specified by the regulatory authority.

§ 816.79 Protection of underground mining.

(a) No surface coal mining activities shall be conducted within 500 feet of active or abandoned underground mines except to the extent that—

(1) The nature, timing, and sequence of the operations are jointly approved by the regulatory authority and the Mine Safety and Health Administration and the State agency, if any, responsible for the safety of mine workers; and

(2) The activities result in improved resource recovery, abatement of water pollution, or elimination of hazards to the health and safety of the public.

(b) The vertical distance between surface and underground mines working separate seams shall be sufficient to protect the health and safety of the workers and to prevent surface water from entering the underground workings.

(c) All mines plans shall be designed to protect the disturbed surface areas, including spoil disposal sites so as not to endanger any present or future operations of either surface or underground mines.

§ 816.81 Coal processing waste: General requirements.

(a) All coal processing waste shall be hauled or conveyed and placed in new and existing disposal areas which shall be within the permit area and which are approved by the regulatory authority for this purpose. The coal processing waste disposal area shall be designed, constructed, and maintained—

(1) In accordance with sections 816.71 and 816.72, the provisions of this section and sections 816.82–816.88; and

(2) To prevent combustion.

(b) Coal processing waste materials from activities outside the permit area such as other mines or abandoned mine waste piles may be disposed of in permit areas only if approved by the regulatory authority. The approval shall be based on a showing by the person who conducts surface mining activities, using hydrologic, geologic physical, and chemical analysis, that disposal of these materials does not—

(1) Adversely affect water quality, water flow, or vegetation;

(2) Create public health hazards; or

(3) Cause instability in the disposal areas.

§ 816.82 Coal processing waste banks: Site inspection.

(a) All coal processing waste disposal sites shall be inspected by an engineer or other person approved by the regulatory authority.

(1) The inspection shall occur at least once each week beginning within 7 days after preparation of the disposal area begins and terminating when the coal processing waste bank has been graded, covered in accordance with section 816.85 and topsoil has been distributed on the bank in accordance with section 816.24 or for such longer period as the regulatory authority may require.

(2) The inspections shall include such observations and tests as may be necessary to evaluate the potential hazard to human life and property, and to ensure that all organic material and topsoil have been removed and that proper construction and maintenance are occurring in accordance with the plan submitted under 30 CFR 780.35 and approved by the regulatory authority.

(3) The engineer or other approved inspector shall consider steepness of slopes, seepage, and other visible factors which could indicate potential failure and shall consider the results of failure with respect to the threat to human life and property.

(4) Copies of the inspection findings shall be maintained at the mine site.

(b) If any inspection discloses that a potential hazard exists, the regulatory authority shall be informed promptly of the finding and of the procedures formulated for public protection and remedial action in the event of an emergency. If adequate emergency procedures cannot, for any reason, be formulated or implemented, the regulatory authority shall be notified immediately. The regulatory authority shall then notify the appropriate emergency agencies that emergency procedures are required for the coal processing waste area.

§ 816.83 Coal processing waste banks: Water control measures.

(a) A properly designed subdrainage system shall be provided and shall—

(1) Comply with the provisions of sections 816.71 and 816.72; and

(2) Be covered so as to protect against the entrance of surface water or leachate from the coal processing waste.

(b) All surface drainage from the area above the coal processing waste bank and from the crest and face of the waste disposal area shall be diverted in accordance with section 816.72(d).

(c) Slope protection shall be provided to minimize surface erosion at the site. All disturbed areas including diversion ditches that are not riprapped shall be vegetated upon completion of construction.

(d) All water discharged from a coal processing waste bank shall comply with section 816.42.

§ 816.85 Coal processing waste banks: Construction requirements.

(a) The coal processing waste banks shall be constructed in compliance with sections 816.71 and 816.72 and this section.

(b) Coal processing waste banks shall have a minimum static factor of safety of 1.5.

(c) Compaction requirements during construction or modification of all coal processing waste banks shall meet the requirements of this paragraph, instead of those specified in section 816.72(c). The coal processing waste shall be—

(1) Spread in layers no more than 8 inches in thickness; and

(2) Compacted to attain 90 percent of the maximum dry density to prevent spontaneous combustion and to provide the strength required for stability of the coal processing waste bank. Dry densities shall be determined in accordance with AASHTO T-99, or equivalent.

(d) Following grading of the coal processing waste bank, the site shall be covered with a minimum of 4 feet of the best available non-toxic and non-combustible material in accordance with section 816.22(e) and in a manner that does not impede flow from subdrainage systems.

§ 816.86 Coal processing waste: Burning.

(a) Coal processing waste fires shall be extinguished by the person who conducts the surface mining activities in accordance with a plan approved by the regulatory authority.

(b) Extreme caution shall be taken in all attempts to extinguish burning wastes to insure that no hazards will exist to equipment operators or other persons working or living in the vicinity of the site.

(c) Acceptable techniques for extinguishing burning wastes, include, but are not limited, to the following—

(1) Quenching with surface applications of water;

(2) Isolation of burning wastes by excavation;

(3) Exclusion of oxygen by blanketing or sealing with water, foam or other materials; and

(4) Injecting water or slurry to isolate and quench the wastes.

§ 816.87 Coal processing waste: Burned waste utilization.

(a) Before the person who conducts the surface mining activities may remove burned coal processing waste or other materials from a disposal area, approval shall be obtained from

the regulatory authority. A plan regarding the method of removal, with maps and appropriate drawings to illustrate the proposed sequence of the operation and method of compliance with this part, shall be submitted to the regulatory authority. Consideration shall be given in the plan to potential hazards which may be created to persons working or living in the vicinity of the structure. The plan shall be certified by a qualified engineer.

(b) Burned coal processing waste may be utilized for off-site construction purposes with the approval of the regulatory authority.

§ 816.88 Coal processing waste: Return to underground workings.

Coal processing waste may be returned to underground mine workings only in accordance with the waste disposal program approved by the regulatory authority under 30 CFR 780.35.

§ 816.89 Disposal of noncoal wastes.

(a) Noncoal wastes including, but not limited to, grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, timber and other combustibles generated during surface mining activities shall be placed and stored in a controlled manner in a designated area to insure that leachate and surface runoff do not degrade surface or ground water, fires are prevented, and the area remains stable and is suitable for reclamation and revegetation compatible with the natural surroundings.

(b) The final disposal of noncoal wastes shall be in a designated disposal site. The solid waste disposal site shall be designed and constructed with appropriate water barriers on the bottom and sides of the designated site. The wastes shall be routinely compacted and covered to prevent combustion and wind born waste. When the disposal is completed or when the surface mining activities are completed, a minimum of 2 feet of soil cover shall be placed over the site. The operation of the disposal site shall be conducted in accordance with all local, State, and Federal requirements.

(c) At no time shall the person who conducts the surface mining activities allow any solid waste material to be deposited at refuse embankments or impoundment sites nor shall the person who conducts surface mining activities allow any excavation for solid waste disposal to be located within 8 feet of any coal outcrop or coal storage area.

§ 816.91 Coal processing waste: Dams and embankments: General requirements.

Sections 816.91-816.93 apply to existing and proposed dams and embankments constructed of coal processing waste or intended to impound coal processing waste.

(a) All dams and embankments including those not meeting the size or other criteria of 30 CFR 77.216(a), shall be routinely inspected by a registered professional engineer, or someone under the supervision of a registered professional engineer, in accordance with Mine Safety and Health Review Commission regulations in 30 CFR 77.316-3.

(b) All dams and embankments subject to this section shall be routinely maintained. Vegetative growth shall be cut where necessary to facilitate inspection and repairs. Ditches and spillways shall be cleaned. Any combustible materials present on the surface, other than that used for surface stability such as mulch or dry vegetation, shall be removed and any other appropriate maintenance procedures followed.

(c) All dams and embankments subject to this section shall be inspected and certified annually as having been constructed and modified in accordance with current prudent engineering practices to minimize the possibility of failures. Any changes in the geometry of the dam or embankment shall be highlighted and included in the annual certification report. These certifications shall include a report on—

(1) Existing and required monitoring procedures and instrumentation;

(2) The average and maximum depths and elevations of any impounded waters over the past year;

(3) Existing storage capacity of the dam or embankment;

(4) Any fires occurring in the material over the past year; and

(5) Any other aspects of the dam or embankment affecting stability.

(d) A person who conducts surface mining activities shall submit to the regulatory authority plans for any enlargements, reductions in size, reconstruction, or other modification of impounding structures. The regulatory authority shall have approved the plans before alterations begin.

§ 816.92 Coal processing waste: Dams and embankments: Site preparation.

Before coal processing waste is placed at a dam or embankment:

(a) Clearing and grubbing of all trees, shrubs, grasses, and other organic material shall be performed and all combustibles shall be removed and stockpiled in accordance with the requirements of this part.

(b) All surface drainage shall be diverted away from the crest and downstream face of the dam or embankment. Diversion ditches shall be designed, constructed, utilized, and maintained to prevent blockage and to pass the peak runoff from a 24-hour precipitation event with a 100-year recurrence interval unless greater event is specified by the regulatory authority. Sediment control structures shall be provided at each discharge of each diversion ditch before entry into natural watercourses in accordance with sections 816.41-816.55.

(c) Slope protection shall be provided to minimize surface erosion at the site and sediment control structures shall be required. All disturbed areas including diversion ditches that are not riprapped shall be vegetated upon completion of construction.

§ 816.93 Coal processing waste: Dams and embankments: Construction.

(a) Waste shall not be used in the construction of dams and embankments unless demonstrated through appropriate engineering analysis to have no adverse effect on stability, and approved by the regulatory authority.

(b) The design of the dam or embankment shall be based on the flood from the probable maximum precipitation event unless the person who conducts the surface mining activities shows that the failure of the dam or embankment would not cause loss of life or severely damage property or the environment, in which case and depending on site conditions, a design to safely pass the flow from a 100-year precipitation event may be specified by the regulatory authority.

(c) One or more spillways shall be provided for the dam or embankment to pass that portion of the design storm that cannot be safely stored. Spillways and outlet works shall be designed to provide adequate protection against erosion. Inlets shall be protected against blockage.

(d) The design freeboard distance between the lowest point on the embankment crest and the maximum water elevations shall be at least 3 feet.

(e) Dams and embankments shall have minimum safety factors as follows:

Case	Loading condition	Minimum safety factor
I	End of construction	1.3
II	Partial pool with steady seepage saturation.	1.5
III	Steady seepage from spillway or decant crest.	1.5
IV	Earthquake (cases II and III with seismic loading).	1.0

(f) The dam or embankment foundation and abutments shall be stable under all conditions of construction and operation of the impoundment. Sufficient foundation investigations and laboratory testing shall be performed to determine the factors of safety of the dam or embankment for all loading conditions in paragraph (e)

of this section and for all increments of construction.

(g) Allowances shall be made for settlement of the dam or embankment and the foundation so that the freeboard will be maintained.

(h) Dams or embankments created for impounding waste materials shall be subject to a minimum drawdown criteria that allows the facility to be evacuated by spillways or decants of 90 percent of the volume of water stored during the designed precipitation event within 10 days.

(i) For each dam and embankment a permanent identification sign, at least 6 feet high shall—

(1) Show the permit number for the surface coal mining and reclamation operations;

(2) Show the name of the person operating or controlling the dam; and

(3) Be located on or immediately adjacent to each dam.

§ 816.95 Air resources protection.

(a) *Fugitive dust.* Each person who conducts surface mining activities shall plan and employ fugitive dust control measures as an integral part of site preparation, coal mining, and reclamation operations. The regulatory authority shall specify the control measures appropriate for use in planning, according to applicable Federal and State air quality standards, climate, existing air quality in the area affected by mining, and the available control technology.

(b) *Control measures.* The fugitive dust control measures to be used, depending on applicable Federal and State air quality standards, the climate, existing air quality, size of the operation, and type of operation shall include, but not be limited to—

(1) Periodic watering of unpaved roads with the minimum frequency of watering specified according to quantitative standard approved by the regulatory authority;

(2) Chemical stabilization of unpaved roads with nontoxic soil cement or dust palliatives mixed into the upper 1 or 2 inches or more of the road surface;

(3) Paving of roads;

(4) Prompt removal of coal, rock, soil, and other dust-forming debris from roads and frequent scraping and compaction of unpaved roads to stabilize the road surface;

(5) Restricting the speed of vehicles to reduce the length and size of any fugitive dust caused by travel;

(6) Revegetating, mulching, or otherwise stabilizing the surface of all areas adjoining roads that are sources of fugitive dust;

(7) Restricting the travel of vehicles on other than established roads;

(8) Enclosing, covering, watering or otherwise treating loaded haul trucks and railroad cars to reduce loss of material to wind and spillage;

(9) Substituting of conveyor systems for haul trucks and covering of conveyor systems when conveyed loads are subjected to wind erosion;

(10) Minimizing the area of disturbed land;

(11) Prompt revegetation of regraded lands;

(12) Use of alternatives for coal-handling methods, restriction of dumping procedures, wetting of disturbed materials during handling, and compaction of disturbed areas;

(13) Orienting mining operations so as to place temporary spoil piles or ridges perpendicular to prevailing winds to reduce wind erosion;

(14) Planting of special windbreak vegetation at critical points in the permit area;

(15) Control of dust from drilling using water sprays, hoods, dust collectors, or other controls;

(16) Restricting the areas to be blasted at any one time to reduce fugitive dust;

(17) Restricting activities causing fugitive dust during periods of air stagnation;

(18) Extinguishing any areas of burning or smoldering coal and periodically inspecting for burning areas whenever the potential for spontaneous combustion is high;

(19) Reducing the period of time between initially disturbing the soil and revegetating or other surface stabilization; and

(20) Restricting fugitive dust at spoil and coal transfer and loading points with water sprays, negative pressure systems and baghouse filters, chemicals, or other practices.

(c) *Additional measures.* Where the regulatory authority determines that application of fugitive dust control measures listed in paragraph (b) of this section is insufficient to achieve and maintain applicable Federal and State air-quality standards, the regulatory authority may require additional measures and practices as necessary to insure compliance with all applicable air-quality standards.

(d) *Monitoring.* Air monitoring equipment shall be installed and monitoring shall be conducted in accordance with the air quality monitoring program submitted under 30 CFR 780.14(a)(2) and as approved by the regulatory authority.

§ 816.97 Protection of fish, wildlife, and related environmental values.

(a) Any person conducting surface mining activities shall, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts of the operation on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable.

(b) A person who conducts surface mining activities shall promptly report to the regulatory authority the presence in the permit area of any critical habitat of a threatened or endangered species listed by the Secretary, any plant or animal listed as threatened or endangered by the State, or any bald or golden eagle, of which the person engaged in surface mining activities becomes aware and which was not previously reported to the regulatory authority.

(c) A person who conducts surface mining activities shall insure that the design and construction of telephone lines, electric power lines, distribution lines, and other transmission facilities on the permit area are in accordance with the guideline set forth in "Environmental Criteria for Electric Transmission System" (USDI, USDA (1970)) or in such alternative guidance manuals as may be approved by the regulatory authority. Distribution lines shall be designed and constructed in accordance with REA Bulletin 61-10 "Powerline Contracts by Eagles and Other Large Birds" or in such alternative guidance manuals as may be approved by the regulatory authority. The two works named in this paragraph are hereby incorporated by reference. These materials are incorporated as they exist on the date of adoption of this part, and notices of changes in these materials will periodically be published in the FEDERAL REGISTER. These two works are available at all OSM regional offices and at the OSM office in Washington, D.C. and on file at the Office of the Federal Register.

(d) Each person who conducts surface mining activities shall to the extent possible using the best technology currently available—

(1) Locate and operate haul and access roads so as to avoid or minimize impacts to important fauna species or other species protected by State or Federal law;

(2) Fence roadways where specified by the regulatory authority to guide locally important wildlife to roadway underpasses or overpasses and construct the necessary passages. No new barrier shall be created in known and important fauna migration routes;

(3) Fence, cover, or use other appropriate methods to exclude fauna from ponds which contain hazardous concentrations of toxic-forming materials;

(4) Restore, enhance, or avoid habitats of unique value for fauna;

(5) Restore, enhance, or maintain natural riparian vegetation on the banks of streams, lakes, and other wetland areas;

(6) Avoid intermittent stream channels or restore them to natural, meandering shapes of the same gradient;

(7) Avoid perennial stream channels or restore them to their former longitudinal profile and cross section considering fauna habitats (usually a pattern of riffles, pools, and drops rather than a uniform depth);

(8) Advise all permanent and contractual personnel of pertinent State and Federal laws and regulations pertaining to fauna resources;

(9) Not use persistent pesticides on the area during surface mining and reclamation activities;

(10) Make every effort to prevent, control, and suppress range, forest, and coal fires;

(11) If fauna habitat is to be a primary or secondary postmining land use, the operator shall in addition to the requirements of 30 CFR 816.111-816.117—

(i) Select plant species to be used on reclaimed areas based on the following criteria—

(A) Their proven nutritional value for fauna,

(B) Their uses as cover for fauna, and

(C) Their ability to support and enhance fauna habitat after release of bonds; and

(ii) Distribute flora groupings to maximize benefit to fauna. Flora should be grouped and distributed in a manner which optimizes edge effect, cover, and other benefits for fauna;

(12) Where row crops are to be the primary land use, surround fields with rows of trees or hedges suitable for reducing wind, retaining moisture, and providing habitat for birds and other small animals and where desirable, intersperse trees, other vegetation types, and fence rows, throughout the harvested area to break up large blocks of monoculture and to diversify habitat types to make them more suitable for small animals. Wetlands shall be preserved or created rather than drained or otherwise permanently abolished; and

(13) Where the primary land use is to be residential, public service, or industrial land use, intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs and trees useful as food and cover for birds and small animals.

§ 816.99 Slides and other damage.

(a) An undisturbed natural barrier shall be provided beginning at the elevation of the lowest coal seam to be mined and extending from the outslope for such distance as determined by the regulatory authority to assure stability. The barrier shall be retained in place to prevent slides and erosion.

(b) At any time a slide occurs which may have a potential adverse affect on life, property, health, safety, or the environment in the permit area, the person who conducts the surface mining activities shall notify the regulatory authority by the fastest available means and shall comply with any remedial measures required by the regulatory authority.

§ 816.100 Contemporaneous reclamation.

Reclamation efforts including backfilling, grading, topsoil replacement and revegetation, on all land that is disturbed by surface mining activities shall occur as contemporaneously as practicable with mining operations.

§ 816.101 Backfilling and grading: General requirements.

(a) *Timing of backfilling and grading.*

(1) *Contour mining.* Rough backfilling and grading shall follow coal removal by not more than 60 days or 1,000 linear feet.

(2) *Open pit mining with thin overburden.* Rough backfilling and grading shall occur in accordance with the time schedule approved by the regulatory authority.

(3) *Area strip mining.* Rough backfilling and grading shall be completed within 90 days and shall not be more than four spoil ridges behind the pit being worked, the spoil from the active pit being considered the first ridge.

(b) *Method for backfilling and grading.*

(1) Except as specifically exempted in this subchapter, all disturbed areas shall be returned to approximate original contour. Each person who conducts surface mining activities shall haul or convey, backfill, compact (where advisable to insure stability or to prevent leaching) and grade all spoil to eliminate all highwalls, spoil piles, and depressions.

(2) Backfilled material shall be placed to minimize adverse effects on ground water, to minimize off-site effects and to support the approved postmining land use.

(3) The postmining graded slope need not be of uniform slope.

(4) Cut-and-fill terraces may be used only in those situations expressly identified in section 816.102.

§ 816.102 Backfilling and grading: Grading requirements.

(a) The final graded slopes shall not exceed in grade either the approximate premining slopes or any lesser slopes approved by the regulatory authority based on consideration of soil, climate, or other characteristics of the surrounding area. Postmining final graded slopes need not be uniform but shall approximate the general nature of the premining topography. The requirements of this section may be modified by the regulatory authority where the surface mining activities are reaffecting previously mined lands that have not been restored to the standards of this part and sufficient spoil is not available. The person who conducts surface mining activities shall, at a minimum—

(1) Retain all overburden and spoil on the solid portion of existing or new benches; and

(2) Backfill and grade to the most moderate slope possible to eliminate the highwall which does not exceed the angle of repose or such lesser slope as is necessary to achieve a minimum static safety factor of 1.3. In all cases the highwall shall be eliminated.

(b) On approval by the regulatory authority in order to conserve soil moisture, ensure stability, and control erosion on final graded slopes, cut-and-fill terraces may be allowed if the terraces are compatible with the approved postmining land use and are appropriate substitutes for construction of lower grades on the reclaimed lands. The terraces shall meet the following requirements:

(1) The width of the individual terrace bench shall not exceed 20 feet unless specifically approved by the regulatory authority as necessary for stability, erosion control, or roads included in the approved post-mining land use plan.

(2) The vertical distance between terraces shall be as specified by the regulatory authority to prevent excessive erosion and to provide long-term stability.

(3) The slope of the terrace outslope shall not exceed $1v:2h$ (50 percent). Outslopes which exceed $1v:2h$ (50 percent) may be approved if they have a minimum static safety factor of more than 1.3 and provide adequate control over erosion and closely resemble the surface configuration of the land prior to mining. In no case may highwalls be left as part of terraces.

(4) Culverts and underground rock drains shall be used on the terrace only when approved by the regulatory authority.

(c) Small depressions may be constructed if they—

(1) Are approved by the regulatory authority to minimize erosion, conserve soil moisture, or promote vegetation;

(2) Do not restrict normal access; and

(3) Are not inappropriate substitutes for lower grades on the reclaimed lands.

(d) All operations on slopes above 20 or on lesser slopes that the regulatory authority defines as steep slopes shall meet the provisions of 30 CFR Part 826.

(e) All final grading, preparation of overburden before replacement of topsoil, and placement of topsoil, in accordance with section 816.24, shall be done along the contour to minimize

subsequent erosion and instability. If such grading, preparation, or placement along the contour is hazardous to equipment operators, then grading, preparation, or placement in a direction other than generally parallel to the contour may be used. In all cases, grading, preparation, or placement shall be conducted in a manner which minimizes erosion and provides a surface for replacement of topsoil which will minimize slippage.

§ 816.103 Backfilling and grading: Covering coal and acid- and toxic-forming materials.

(a) *Cover.*

(1) A person who conducts surface mining activities shall cover, with a minimum of 4 feet of the best available nontoxic and noncombustible material, all exposed coal seams remaining after mining and any acid forming or toxic forming combustible materials, or any other materials identified by the regulatory authority, that are exposed, used, or produced during mining;

(2) If necessary, these materials shall be treated to neutralize toxicity in order to prevent water pollution and sustained combustion, and to minimize adverse effects on plant growth and land uses;

(3) Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or otherwise to meet local conditions, the regulatory authority shall specify thicker amounts of cover using nontoxic material; or

(4) Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution.

(b) *Stabilization.* Backfilled materials shall be selectively hauled or conveyed and compacted wherever necessary to prevent leaching of acid-forming and toxic-forming materials into surface or ground waters and wherever necessary to insure the stability of the backfilled materials. The method of compacting material and the design specifications shall be approved by the regulatory authority before the acid-forming or toxic-forming materials are covered.

§ 816.104 Backfilling and grading: Thin overburden.

(a) The provisions of this section apply only where the final thickness is less than 0.8 of the initial thickness. Initial thickness is the sum of the overburden thickness and coal thickness. Final thickness is the product of the overburden thickness times the bulking factor to be determined for each mine area. The provisions of this section apply only when operations cannot be carried out to comply with the requirements of section 816.101 to achieve the approximate original contour.

(b) In surface mining activities carried out continuously in the same limited pit area for more than 1 year from the day coal-removal operations begin and where the volume of all available spoil and suitable waste materials over the mine plan area is demonstrated to be insufficient to achieve approximate original contour, surface mining activities shall be conducted to meet, at a minimum, the following standards—

(1) Haul or convey, backfill, and grade, using all available spoil and suitable waste materials from the entire mine area, to attain the lowest practicable stable grade, to achieve a static safety factor of 1.3, and to provide adequate drainage and long-term stability of the regraded areas and to cover all acid-forming and toxic-forming materials.

(2) Eliminate highwalls by grading or backfilling to stable slopes not exceeding $1v:2h$ (50 percent), or such lesser slopes as the regulatory authority may specify to reduce erosion, maintain the hydrologic balance, or allow the approved postmining land use.

(3) Haul or convey, backfill, grade, and revegetate in accordance with sections 816.111–816.117 to achieve an ecologically sound land use compatible with the prevailing land use in unmined areas surrounding the permit area; and

(4) Haul or convey, backfill, and grade to ensure the impoundments are constructed only where—

(i) It has been demonstrated to the regulatory authority's satisfaction that all requirements of sections 816.41–816.56 have been met; and

(ii) The impoundments have been approved by the regulatory authority as suitable for the approved postmining land use and as meeting the requirements of this part and all other applicable Federal and State laws and regulations.

§ 816.105 Backfilling and grading: Thick overburden.

(a) The provisions of this section apply only where the final thickness is greater than 1.2 of the initial thickness. Initial thickness is the sum of the overburden thickness and coal thickness. Final thickness is the product of the overburden thickness times the bulking factor to be determined for each mine area. The provisions of this section apply only when operations cannot be carried out to comply with the requirements of section 816.101 to achieve the approximate original contour.

(b) In surface mining activities where the volume of spoil over the mine plan area is demonstrated to be more than sufficient to achieve the approximate original contour surface coal mining operations shall be conducted to meet at a minimum the following standards—

(1) Haul or convey, backfill, and grade all spoil and wastes not required to achieve approximate original contour in the permit area to the lowest practicable grade but not more than the angle of repose and to cover all acid-forming and other toxic materials;

(2) Haul or convey, backfill, and grade excess spoil and wastes only within the permit area and dispose of such materials in conformance with sections 816.71–816.73;

(3) Haul or convey, backfill, and grade excess spoil and wastes to maintain the hydrologic balance in accordance with sections 816.41–816.57 and to provide long-term stability by preventing slides, erosion and water pollution.

(4) Haul or convey, backfill, grade, and revegetate wastes and excess spoil to achieve an ecologically sound land use approved by the regulatory authority as compatible with the prevailing land uses in unmined areas surrounding the permit area.

(5) Eliminate all highwalls and depressions by backfilling with spoil and suitable waste materials; and

(6) Meet the revegetation requirements of sections 816.111–816.117 for all disturbed areas.

§ 816.106 Regrading or stabilizing rills and gullies.

When rills or gullies deeper than 9 inches form in areas that have been regraded and topsoiled, the rills and gullies shall be filled, graded, or otherwise stabilized and the area reseeded or replanted according to sections 816.111–816.117. The regulatory authority shall specify that rills or gullies of lesser size be stabilized if the rills or gullies are disruptive to the approved postmining land use or may result in additional erosion and sedimentation.

§ 816.111 Revegetation: General requirements.

(a) Each person who conducts surface mining activities shall establish on all affected land a diverse, effective, and permanent vegetative cover of species native to the area of disturbed land or species that supports the approved postmining land use. For areas designated as prime farmland, the reclamation requirements of 30 CFR Part 823 shall apply.

(b) All revegetation shall be in compliance with the plan approved by the regulatory authority and shall be carried out in a manner that encourages a

prompt vegetative cover and recovery of productivity levels compatible with the approved postmining land use.

(1) All disturbed land, except water areas and surface areas of roads that are approved as a part of the post-mining land use, shall be seeded or planted to achieve a vegetative cover of the same seasonal variety native to the area of disturbed land.

(2) The vegetative cover shall be capable of stabilizing the soil surface with respect to erosion.

(3) Vegetative cover shall be considered of the same seasonal variety when it consists of a mixture of species of equal or superior utility for the intended land use when compared with the utility of naturally occurring vegetation during each season of the year.

(4) If both the premining and post-mining land use is intensive agriculture, planting of the crops normally grown will meet the requirement of paragraph (b)(1) of this section.

§ 816.112 Revegetation: Use of introduced species.

Introduced species may be substituted for native species only if approved by the regulatory authority after appropriate field trials have demonstrated that the introduced species are of equal or superior utility for the approved postmining land use, or are necessary to achieve a quick, temporary, and stabilizing cover. Introduced species shall meet the requirements of applicable State and Federal seed or introduced species statutes, and shall not include poisonous or toxic species.

§ 816.113 Revegetation: Timing.

Seeding and planting of disturbed areas shall be conducted during the first normal period for favorable planting conditions after final preparation. The normal period for favorable planting shall be that planting time generally accepted locally for the type of plant materials selected. Any disturbed areas, except water areas and surface areas of roads approved for the post-mining land use, which have been final graded and topsoiled shall be mulched as required by section 816.114 and seeded, if required by the regulatory authority, with a temporary cover of small grains, grasses, or legumes to control erosion until an adequate permanent cover is established.

§ 816.114 Revegetation: Mulching.

(a) Suitable mulch shall be used on all regraded and topsoiled areas to control erosion, to promote germination of seeds, and to increase the moisture retention of the soil. Mulch shall be anchored to the soil surface to ensure effective protection of the soil and vegetation.

(b) Annual grasses and grains such as oats, rye, and wheat may be used instead of mulch when the regulatory authority determines that they will provide adequate stability and that they will later be replaced by species approved for the post-mining land use.

§ 816.115 Revegetation: Grazing.

When the approved post-mining land use is range or pasture land, the reclaimed land shall be used for livestock grazing at a stocking rate equal to or less than approved by the regulatory authority for at least the last two full years of liability required under section 816.116 (b).

§ 816.116 Revegetation: Standards for success.

(a) Success of revegetation shall be measured by techniques approved by the regulatory authority on the basis of reference areas approved by the regulatory authority. This is to adjust for natural differences between the pre-mining years and post-mining years. Management of the reference area shall be comparable to that which is required for the approved post-mining land use of the mine plan area.

(b) (1) The ground cover and productivity of living plants on the revegetated area shall be equal to the ground cover and productivity of living plants on the same approved reference area before mining for—

(i) Each year of a period of 5 full consecutive years after the last year of augumented seeding, fertilizing, irrigation, or other major work that ensures success in areas of more than 26.0 inches average annual precipitation; or

(ii) Each year of a period of 10 full consecutive years after the last year of augumented seeding, fertilizing, irrigation, or other major work that ensures success in areas of less than or equal to 26.0 inches average annual precipitation.

(2) For purposes of paragraph (b)(1)(i) and (ii) of this section, the average annual precipitation shall be determined either—

(i) By interpolation, using standard interpolation techniques, from "Mean Annual Precipitations," Map, p. 97, The National Atlas of the United States, U.S. Department of the Interior, Geological Survey, 1970. This work is hereby incorporated by reference as it exists on the date of adoption of this Subchapter. Notices of changes in this Atlas will periodically be published in the FEDERAL REGISTER. The Atlas is available at all OSM offices and is on file in the Office of the Federal Register; or

(ii) Based on 10 years of continuous and reliable precipitation records from stations located in or adjacent to the permit area.

(3) The ground cover or productivity shall be considered equal if it is at least 90 percent of the ground cover or productivity of the reference area with 90 percent statistical confidence and with 80 percent statistical confidence on shrublands for any significant portion of the mined area. A lower percentage of ground cover and productivity may be authorized by the regulatory authority under the following standards:

(i) For previously mined areas that are not reclaimed to the performance standards in this Subchapter, the ground cover of living plants for the areas shall not be less than can be supported by the best available topsoil and overburden in the mine plan area and in no case less than that existing before redisturbance;

(ii) For areas to be developed for industrial or residential use less than 2 years after regrading is completed the ground cover of living plants shall not be less than required to control erosion; and

(iii) Success in revegetation of cropland shall be determined on the basis of crop production from the mined area compared to the reference area. Crop production from the mined area shall be equal to that of the approved reference area for a minimum of two growing seasons. Production shall not be considered equal if it is less than 90 percent of the production of the reference area for any significant portion of the mined area.

(c) The person who conducts surface mining activities shall—

(1) Maintain any necessary fences and proper management practices; and

(2) Conduct periodic measurements of vegetation, soils, and water prescribed or approved by the regulatory authority to identify conditions during the applicable period of liability specified in paragraph (b) of this section.

(d) For permit areas 40 acres or less in size in locations with an average annual precipitation of more than 26 inches, the following performance standards, when approved by the regulatory authority, may be used instead of reference areas to measure success of revegetation on sites that are disturbed. These standards shall be met for a minimum of 5 full consecutive years.

(1) Areas planted only in herbaceous species shall sustain a vegetative ground cover of 70 percent for 5 full consecutive years.

(2) Areas planted with a mixture of herbaceous and woody species shall sustain a herbaceous vegetative ground cover of 50 percent for 5 full consecutive years and 400 woody plants per acre after 5 years. On steep slopes, the minimum number of woody plants shall be 600 per acre.

(3) For purposes of this section, herbaceous species means grasses, legumes, and nonleguminous forbs; woody plants means woody shrubs, trees and vines; and ground cover means the area of ground covered by the combined aerial parts of vegetation and the litter that is produced naturally onsite, expressed as a percentage of the total area of measurement.

§ 816.117 Revegetation: Tree stocking for forest land.

This section sets forth forest resource conservation standards for reforested operations to ensure that a cover of trees of commercial species, sufficient to adequately use the available growing space, is established after surface mining activities.

(a) The following are the minimum acceptable stocking standards for areas east of the 100th meridian west longitude as measured 5 years after planting:

(1) The area shall contain an average point count of 600 trees per acre, to be computed as follows:

(i) 600 established trees of commercial species per acre at least 3 years of age each one to count as one toward meeting the stocking requirement; and

(ii) Root crown or root sprouts over 1 foot in height shall count as one toward meeting the stocking requirement.

(2) Rock areas, permanent roads, and surface water drainage ways in forest land shall not require stocking.

(3) A "countable tree" means a tree that can be used in calculating the degree of stocking under the following criteria:

(i) The tree shall be in place at least 3 growing seasons.

(ii) The tree shall be alive and healthy.

(iii) The tree shall have at least one-third of its length in live crown.

(iv) The tree shall be a commercial species which the regulatory authority determines will produce commercial trees physiologically suited for the area.

(4) Stocking means a measure of the degree to which space is occupied by well-distributed countable trees.

(b) The following are the minimum performance standards for areas west of the 100th meridian west longitude where shelterbelts, wildlife habitat, commercial forest land, or other forest land are the approved post-mining land use.

(1) A pre-mining and post-mining vegetation inventory of trees, shrubs, and half-shrubs shall be conducted on established reference areas according to methods approved by the regulatory authority. This inventory shall contain, but not be limited to—

(i) Site quality;

(ii) Stand size;

(iii) Stand condition;

(iv) Site and species relations; and

(v) Appropriate forest land utilization considerations.

(2) Appropriate trees, shrubs, and half-shrubs on the revegetated area shall be measured using the approved methods after the vegetation has been established according to the approved mining and reclamation plan. The density, number per unit area, of live woody plants which have been in place at least 3 years on the rehabilitated area shall be equal to or greater than 90 percent of the density of live woody plants of the same life form (trees vs. shrubs and half-shrubs) on the reference area with 90 percent statistical confidence. When this ground cover requirement is met, the 5 or 10 year responsibility period required in section 816.116 shall begin.

(3) Upon expiration of the 5 or 10 year responsibility period and at the time of request for bond release, each person who conducts surface mining activities shall provide documentation required in paragraph (b)(2) of this section showing that the woody plants established on the rehabilitated site meet the requirements of the approved mining and reclamation plan. Species diversity, distribution, seasonal variety, vigor, and regenerative capacity of the vegetation of the revegetated area shall be evaluated on the basis of the results which could reasonably be expected using the methods of revegetation in the approved mining and reclamation plan.

§ 816.131 Cessation of operations: Temporary.

(a) Each person who conducts surface mining activities shall, in areas in which there are no current operations, but in which operations are to be resumed under an approved plan, effectively support and close all surface access openings to underground operations, and secure surface facilities. Temporary abandonment shall not relieve a person of his obligation to comply with provisions of the approved mining and reclamation operations permit.

(b) Before temporary cessation of operations and reclamation, each person who conducts surface mining activities shall submit to the regulatory authority a notice of intention to cease or abandon operations and reclamation. This notice shall include a statement of the exact number of acres affected in the permit area, the extent and kind of reclamation accomplished, and identification of the regrading, revegetation, environmental monitoring, and water treatment activities that will continue during the temporary cessation.

§ 816.132 Cessation of operations: Permanent.

(a) Each person who intends to permanently cease surface mining activities shall close or backfill or otherwise permanently reclaim all affected areas in accordance with this Chapter and the plan approved by the regulatory authority.

(b) All equipment, structures, or other facilites not required for continued surface mining activities and monitoring unless approved as suitable for the post-mining land use, shall be removed and the affected land reclaimed.

§ 816.133 Post-mining land use.

(a) *General.* All affected areas shall be restored in a timely manner—

(1) To conditions that are capable of supporting the uses which they were capable of supporting before any mining; or

(2) To higher or better uses achievable under criteria and procedures of this section.

(b) *Determining pre-mining use of land.* The pre-mining uses of land to which the post-mining land use is compared shall be those uses which the land previously supported if the land had not been previously mined and had been properly managed.

(1) The post-mining land use for land that has been previously mined and not reclaimed shall be judged on the basis of the highest and best use that can be achieved and is compatible with surrounding areas.

(2) The post-mining land use for land that has received improper management shall be judged on the basis of the pre-mining use of surrounding lands that have received proper management.

(3) If the premining use of the land was changed within 5 years of the beginning of mining, the comparison of post-mining use to pre-mining use shall include a comparison with the historic use of the land as well as its use immediately preceding mining.

(c) Before permanent abandonment, the permit area shall be restored, in a timely manner, either to conditions capable of supporting the uses they were capable of supporting before any mining or to conditions capable of supporting approved alternative land uses. Alternative land uses may be approved by the regulatory authority after consultation with the landowner or the land-management agency having jurisdiction over the lands, if the following criteria are met:

(1) The proposed post-mining land use is compatible with adjacent land use and, where applicable, with existing local, State, or Federal land use policies and plans; a written statement of the views of the authorities with statutory responsibilities for land use

policies and plans is submitted to the regulatory authority before surface mining activities began; any required approval of local, State, or Federal land management agencies, including any necessary zoning or other changes required for the land use, is obtained and remains valid throughout the surface mining activities;

(2) Specific plans are prepared and submitted to the regulatory authority which show the feasibility of the post-mining land use as related to needs, projected land use trends, and markets and that include a schedule showing how the proposed use will be developed and achieved within a reasonable time after mining and be sustained. The regulatory authority may require appropriate demonstrations to show that the planned procedures are feasible, reasonable, and integrated with mining and reclamation, and that the plans will result in successful reclamation;

(3) Provision of any necessary public facilities is ensured as evidenced by letters of commitment from parties other than the person who conducts surface mining activities, as appropriate, to provide the public facilities in a manner compatible with the plans submitted under 30 CFR 780.23. The letters shall be submitted to the regulatory authority before surface mining activities begin;

(4) Specific and feasible plans are submitted to the regulatory authority which show that financing and attainment and maintenance of the post-mining land use are feasible and are supported by letters of commitment from parties other than the person who conducts the surface mining activities;

(5) Plans for the post-mining land use are designed under the general supervision of a registered professional engineer, or other appropriate professional, who will ensure that the plans conform to applicable accepted standards for adequate land stability, drainage, and vegetative cover, and esthetic design appropriate for the post-mining use of the site;

(6) The proposed use will neither present actual or probable hazard to public health or safety nor will it pose any actual or probable threat of water flow diminution or pollution;

(7) The use will not involve unreasonable delays in reclamation;

(8) Necessary approval of measures to prevent or mitigate adverse effects on fish, wildlife and related environmental values is obtained from the regulatory authority and appropriate State and Federal fish and wildlife management agencies before surface mining activities begin; and

(9) Proposals to change pre-mining land uses of range, fish and wildlife forest land, hayland, or pasture to a post-mining cropland use, where the cropland would require continuous maintenance such as seeding, plowing, cultivation, fertilization, or other similar practices to be practicable or to comply with applicable Federal, State, and local laws, are reviewed by the regulatory authority to ensure that—

(i) There is a firm written commitment by the person who conducts surface mining activities or by the landowner or land manager to provide sufficient crop management after release of applicable performance bonds to assure that the proposed post-mining cropland use remains practical and reasonable;

(ii) There is sufficient water available and committed to maintain crop production; and

(iii) Topsoil quality and depth are sufficient to support the proposed use.

PART 817—PERMANENT PROGRAM PERFORMANCE STANDARDS—UNDERGROUND MINING ACTIVITIES

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AUTHORITY: Sections 102, 201, 501, 503, 504, 507, 508, 516, 517, 519, 701, 717 and 719, Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 471, 474, 478, 495, 498, 501, 516, 526 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1257, 1258, 1266, 1267, 1269, 1291, 1307, 1309).

§ 817.1 Scope.

This Part sets forth the minimum performance standards for underground mining activities.

§ 817.2 Objectives.

This part is intended to ensure that all underground mining activities are conducted in a manner which preserves and enhances environmental and other values in accordance with the Act.

§ 817.11 Signs and markers.

(a) *Specifications.* Each sign and marker required to be posted under this Part shall—

(1) Be of a uniform design throughout the operation that can be seen and read easily;

(2) Be made of durable material; and

(3) Conform to each local ordinance and code.

(b) *Duration of maintenance.* Each person who conducts underground mining activities shall maintain signs and markers during all activities to which they pertain.

(c) *Mine and permit identification signs.*

(1) Each person who conducts underground mining activities shall display identification signs at all points of access from each public road and highway to surface areas associated with underground mining activities.

(2) The signs shall show the name, business address, and telephone number of the person who conducts underground mining activities and the identification number of each current permit authorizing underground mining activities.

(3) Each sign shall not be removed until after the release of all bonds.

(d) *Perimeter markers.* Each person who conducts underground mining activities shall clearly mark the perimeters of all areas affected by surface operations or facilities before submitting a permit application.

(e) *Buffer zone markers.* Each person who conducts underground mining activities shall mark all buffer zones, as required by section 817.57. Each buffer zone marker shall be designed and placed in the same manner as the perimeter markers. Each buffer zone marker shall be located along the boundary of the buffer zone.

(f) *Blasting signs.* If blasting is conducted incident to underground mining activities, the person who conducts those activities shall conspicuously display:

(1) Signs reading "Blasting Area" at the edge of blasting areas along roads within the permit area; and

(2) Signs clearly explaining the blasting warning and all-clear signals at all entrances to the permit area from each public road or highway.

(g) *Topsoil markers.* Where topsoil or other vegetation-supporting material is required to be segregated and stockpiled under section 817.23, the person who conducts the underground mining activities shall clearly mark the stockpiled material.

§ 817.13 Casing and sealing of underground openings: General requirements.

Each borehole, shaft, well, or other underground opening shall be cased, lined, or otherwise managed to prevent pollution and mixing of surface or ground water, and to ensure the safety of people, livestock, wildlife, and machinery in the area where these openings could be a hazard. Each borehole and well that is within the permit area shall be permanently closed, in a manner approved by the regulatory authority unless the opening is approved for monitoring. This section does not apply to holes drilled and used for blasting, in the area affected by surface operations.

§ 817.14 Casing and sealing of underground openings: Temporary.

(a) Each mine entry which is temporarily inactive but has a projected useful service under the approved mine plan shall be protected by barricades or other covering devices, shall be fenced, and signs shall be posted to prevent access into the entries and to identify the hazardous nature of the opening. Any barricade, fence, or other protective device shall be periodically inspected and maintained in good operating condition by the person who conducts the underground mining activities.

(b) Each borehole, shaft, or well which has been identified in the approved mining and reclamation plan to be used for the return of underground development waste, coal processing waste or water to the underground workings or to be used to monitor ground water conditions shall be temporarily sealed prior to use.

§ 817.15 Casing and sealing of underground openings: Permanent.

When no longer needed for mining, each shaft, drift, adit, tunnel, exploratory hole, entryway, or other opening to the surface shall be capped, sealed or backfilled, as required by the regulatory authority consistent with 30 CFR 75.1711 except as otherwise approved by the regulatory authority. Closure measures shall be of a permanent design to prevent access to the mine workings by people and animals and to prevent the flow of water except as otherwise approved by the regulatory authority.

§ 817.21 Topsoil: General requirements.

(a) Before disturbance of areas affected by surface operations or facilities, topsoil and subsoils to be saved under section 817.22 shall be removed from the area as a separate operation and segregated from other material.

(b) After removal, topsoil shall either be immediately redistributed in accordance with section 817.24 or stockpiled pending redistribution, if permissible under section 817.23.

§ 817.22 Topsoil: Removal.

(a) *Timing.* Topsoil shall be removed from areas to be affected by surface operations after the vegetative cover that would interfere with the use of the topsoil is cleared but before any drilling for blasting, mining, or other surface disturbance of areas designated for mine entries, superstructures, coal processing facilities, roads, storage areas, and other major structures incident to underground mining.

(b) *Materials to be removed.* All topsoil shall be removed unless use of alternative materials is approved by the regulatory authority to be segregated in accordance with paragraph (e) of this section. If use of alternative material is approved, all materials to be redistributed shall be removed.

(c) *Additional material to be removed in thin topsoil situations.* If the topsoil is less than 6 inches, a 6 inch layer that includes the A horizon and the unconsolidated materials immediately below the A horizon, or the A horizon and all unconsolidated material if the total available is less than 6 inches, shall be removed and the mixture segregated and replaced as the surface soil layer.

(d) *Subsoil segregation.* The B horizon and portions of the C horizon or other underlying layers demonstrated to have qualities for root development comparable to the B or C horizons shall be segregated and replaced as subsoil if the regulatory authority determines that the segregation and replacement is necessary or desirable to ensure soil productivity consistent with the approved post-mining land use.

(e) *Topsoil substitutes and supplements.* Selected overburden materials may be substituted for, or used as a supplement to, topsoil where the resulting soil medium is equal to or more suitable for vegetation, and if all the following requirements have been met:

(1) It is demonstrated to the regulatory authority by the results of chemical and physical analyses of overburden and topsoil that the selected overburden materials or an overburden and topsoil mixture is more suitable for restoring land capability and productivity and that it is the best available material to support and sustain the approved vegetation. These analyses shall include determinations of pH, sulfide content that when oxidized will lower the pH, percent organic material, nitrogen, phosphorus, potassium, texture class, and water-holding capacity, and such other analyses as required by the regulatory authority. The regulatory authority may also require that results of field-site trials or greenhouse tests be used to demonstrate the feasibility of using such overburden materials.

(2) The chemical and physical analyses and the results of field-site trials and greenhouse tests submitted to the regulatory authority shall be accompanied by a certification from a qualified soil scientist or agronomist stating, on the basis of the test results, that the proposed substitute material is equal to or more suitable for sustaining the vegetation than is the available topsoil, that the substitute material is the best available material to support the vegetation, and that the tests and analyses were conducted under his or her supervision and used standard testing procedures.

(3) The tests and analyses shall be conducted by a laboratory approved by the regulatory authority.

(4) The alternative material shall be removed, segregated, and replaced in compliance with the requirements for topsoil under this section.

(f) *Limits on topsoil removal area.* Where the removal of vegetative material, topsoil, or other materials may result in erosion which may cause air or water pollution, the person who conducts underground mining activities shall—

(1) Limit the size of the area from which topsoil is removed at any one time;

(2) Redistribute the surface soil layer at a time when the physical and chemical properties of topsoil can be protected and erosion can be minimized; and

(3) Take such other measures as the regulatory authority may approve or require.

§ 817.23 Topsoil: Storage.

(a) The topsoil and other materials removed under section 817.22 shall be stockpiled only when it is impractical to promptly redistribute such materials on regraded areas.

(b) The stockpiled materials shall be placed on a stable area within the permit area where the materials shall not be disturbed or exposed to excessive water or wind erosion, or contaminants which lessen their capability to support vegetation before they can be redistributed.

(1) Stockpiles shall be selectively placed and protected from wind and water erosion, unnecessary compaction, and contamination by undesirable materials either by—

(i) An effective cover of nonnoxious, quick-growing annual and perennial plants, seeded or planted during the first normal period for favorable planting conditions; or

(ii) By other methods demonstrated to and approved by the regulatory authority to provide equal protection.

(2) Unless approved by the regulatory authority, stockpiled topsoil and other materials shall not be moved until required for redistribution on a disturbed area.

§ 817.24 Topsoil: Redistribution.

(a) After final grading and before the replacement of topsoil and other materials segregated in accordance with section 817.23, regraded land shall be scarified or otherwise treated to eliminate slippage surfaces and to promote root penetration. If the person who conducts underground mining activities shows, through appropriate tests, and the regulatory authority approves that no harm will be caused to the topsoil and vegetation, the scarification may be conducted after topsoiling.

(b) Topsoil and other materials shall be redistributed in a manner that—

(1) Achieves an approximate uniform, stable thickness consistent with the post-mining land uses, slopes, aspects, and surface drainage system.

(2) Prevents excess compaction of the topsoil; and

(3) Protects the topsoil from wind and water erosion before and after it is seeded and planted.

§ 817.25 Topsoil: Nutrients and soil amendments.

Nutrients and soil amendments in the amounts determined by soil tests shall be applied to the redistributed surface soil layer so that it supports the post-mining land use approved by the regulatory authority and meets the revegetation requirements of sections 817.11–817.17. All soil tests shall be performed by a laboratory approved by the regulatory authority and certified by a qualified agronomist or soil scientist.

§ 817.31 Roads and associated structures: General requirements.

(a) Each person who conducts underground mining activities shall design, construct, utilize, maintain, and reclaim all roads, road rights-of-way, and associated structures to meet the requirements of sections 817.32–817.35, 817.38, and 817.95 to control or prevent erosion and siltation, air and water pollution, and damage to public or private property.

(1) To the extent possible using the best technology currently available, roads, road rights-of-way, associated structures, and other transportation facilities shall not cause damage to fish, wildlife and related environmental values and shall not cause additional contributions of suspended solids to streamflow, or to runoff outside the permit area. In no event shall contributions of suspended solids be in excess of limitations set by applicable State or Federal law.

(2) All roads shall be removed and the land affected regraded and revegetated in accordance with the requirements of section 817.38 unless—

(i) Retention of the road is approved as part of the approved post-mining land use or as being necessary to control erosion adequately;

(ii) The necessary maintenance is assured; and

(iii) All drainage shall be controlled according to section 817.34.

§ 817.32 Road construction: Location.

(a) All surface roads shall be located insofar as possible on ridges or on the flattest and most stable available slopes to minimize erosion. Except as otherwise specifically authorized in this section, no part of any road shall be located in the channel of a perennial stream. Stream fords are prohibited unless they are specifically approved by the regulatory authority as temporary routes across non-flowing streams that will not adversely affect sedimentation or fish, wildlife and related environmental values and that will not be used for coal haulage. All other stream crossings shall be made using bridges, culverts, or other structures designed, constructed, and maintained to meet the requirements of this section. Roads shall not be constructed in a manner that increases erosion or causes additional downstream sedimentation or flooding.

§ 817.33 Road construction: Erosion control.

In order to control erosion and subsequent disturbance of the hydrologic balance, roads shall be designed, constructed, and maintained in compliance with the following:

(a) *Vertical alignment.* Except where the regulatory authority requires lesser grades to control erosion, road grades shall be as follows:

(i) The overall grade shall not exceed $1v:10h$ (10 percent).

(2) The maximum grade shall not exceed $1v:6.5h$ (15 percent).

(3) There shall not be more than 300 feet of grade exceeding 10 percent

within any consecutive 1,000 feet of road constructed.

(4) The road surface shall be sloped toward the ditch line at the minimum rate of one-half inch per foot of surface width or crowned at the minimum rate of one-half inch per foot of surface width as measured from the centerline of the road.

(b) *Road cuts.* This paragraph applies to roads that are to remain in place and in use for more than 5 years or that are to remain as part of the approved post-mining land use. Cut slopes shall not be steeper than specifically authorized by the regulatory authority. The regulatory authority shall not authorize slopes steeper than $1v:1.5h$ in unconsolidated materials or $1v:0.25h$ in rock, except that steeper slopes may be specifically authorized by the regulatory authority if geotechnical analysis demonstrates that a minimum safety factor of 1.5 can be maintained.

(c) *Road embankments.* This paragraph applies to roads that are to remain in place and in use for more than 5 years or that are to remain as part of the approved post-mining land use. Embankment sections shall be constructed in accordance with the following provisions:

(1) All vegetative materials and topsoil shall be removed from the embankment foundation to ensure stability, and no vegetative materials or topsoil shall be placed beneath or in any road embankment.

(2) When an embankment is to be placed on side slopes exceeding $1v:5h$ (20 percent) the existing ground shall be plowed, stepped, and keyed in a manner which ensures the stability of the fill. The minimum dimensions of the keyway shall be 10 feet wide and 2 feet deep below the toe of fill. No material shall be placed, or allowed to slide, below the toe.

(3) Material containing by volume less than 25 percent of rock larger than 6 inches in greatest dimension shall be spread in successive horizontal layers not exceeding 12 inches in thickness before compaction.

(4) Where the material for an embankment consists of rock, broken stone, or fragmented material of a size that makes placing in 12-inch layers impossible under paragraph (c)(3) of this section, the embankment shall be constructed in layers less than 24 inches in thickness, provided the individual pieces are placed so that there is no nesting and all the voids are filled with finer material.

(5) Each layer of the embankment shall be completed, leveled, and compacted before the succeeding layer is placed. Loads of material shall be leveled as placed and kept smooth. The successive layers shall be compacted evenly by routing the hauling and leveling equipment over the layers already in place and by distributing the travel over the entire width of the embankment. This routine shall be continued until no visual horizontal movement of the embankment material is apparent.

(6) Successive lifts shall not be placed until the previous layer is compacted to achieve a density throughout the preceding lift thickness of at least 90 percent of the maximum dry density determined in accordance with American Association of State Highway and Traffic Officers (AASHTO) T-99. The AASHTO technical specification T-99 mentioned in this paragraph is hereby incorporated by reference. This work is incorporated as it exists on the date of adoption of this Part and notices of changes made in these materials will periodically be published in the FEDERAL REGISTER. AASHTO technical specification T-99 is available for inspection at OSM's Offices in OSM regional offices and in OSM's Office in the Department of the Interior, 18th and C Streets, N.W., Washington, D.C. 20240.

(7) Material shall be placed in an embankment only when its moisture content is within 4 percent of the optimum moisture content determined in accordance with AASHTO T-99.

(8) Embankment slopes shall not be steeper than $1v:2h$.

(9) The minimum safety factor for all embankments shall be 1.25, or such higher safety factor as the regulatory authority may specify.

(d) *Natural drainage.* Natural drainways shall not be altered or relocated for the purposes of road construction without the prior approval of the regulatory authority. The regulatory authority may approve alterations and relocations only if—

(1) The natural drainage is not blocked;

(2) No damage occurs to the hydrologic balance; and

(3) There is no adverse impact on adjoining landowners.

§ 817.34 Road construction: Drainage

(a) *General.* (1) Each road shall be designed, constructed, and maintained to have adequate drainage using structures such as, but not limited to, ditches, cross drains, and ditch relief drains. For roads that are to be maintained for more than 1 year, the water-control system shall be designed to safely pass the peak runoff from a 10-year 24-hour precipitation event or greater if required by the regulatory authority. Drainage pipe and culverts shall be constructed to avoid plugging or collapse and erosion at inlets and outlets. Drainage ditches shall be placed at the toe of all cut slopes formed by construction or roads. Trash racks and debris basins shall be installed in the drainage ditches wherever debris from the drainage area could impair the functions of drainage and sediment control structures.

(2) All drainage from roads and associated drainage structures shall pass through sediment control devices such as sedimentation ponds, sediment traps, vegetation filter strips, vegetated drains, straw dikes, mulches, check drains, and dugout ponds.

(b) *Ditches.* A ditch shall be provided on both sides of a through-cut and on the inside shoulder of a cut-fill section, with ditch relief cross-drains being spaced according to grade. Water shall be intercepted before reaching a switchback or large fill and drained safely away in accordance with this section. Water on a fill or switchback shall be released below the fill, using conduit or riprapped channels, and shall not be discharged onto the fill.

(c) *Culverts.* Ditch relief culverts shall be installed according to the following provisions:

(1) Road grade:

Grade percent	Spacing of culverts, in feet, not more than—
2 to 5	800
6 to 10	300
11 to 15	200

(2) Each culvert shall be adequate to safely pass the peak runoff from a 10-year 24-hour precipitation event and shall cross the road at not less than a 30° angle downgrade. The culvert may be designed to carry less than the peak runoff if the ditch will remain stable.

(3) The inlet end shall be protected by a rock headwall or other material approved by the regulatory authority and the outlet end shall be placed below the toe of the fill with an apron of rock riprap or other approved material.

(4) The culvert shall be covered by compacted fill to a minimum depth of 1 foot or half the culvert diameter, whichever is greater.

(5) The culvert shall be capable of sustaining design loads.

(d) *Stream crossings.* Drainage structures are required for stream channel crossings. Drainage structures shall not affect the normal flow or gradient of the stream. In designing drainage structures, consideration will be given to the time of year the stream is crossed and the length of time the structure is used. Embankments constructed across streams shall not exceed 15 feet in height, measured on the upstream side, unless approved by the regulatory authority. Stream crossings which have drainage areas greater than 100 acres shall be designed to safely pass the 100-year

storm or larger event as specified by the regulatory authority.

§ 817.35 Road construction: Surfacing.

Roads shall be surfaced with rock or other material approved by the regulatory authority as sufficiently durable. Toxic or acid-forming substances shall not be used. Vegetation shall not be cleared for more than the width necessary for road and associated ditch construction, to serve traffic needs, and for utilities.

§ 817.36 Other transportation facilities.

Railroad loops, spurs, sidings, or other transport facilities shall be designed, constructed, maintained, and reclaimed to—

(a) Prevent, to the extent possible using the best technology currently available—

(1) Damage to fish, wildlife and related environmental values; and

(2) Additional contributions of suspended solids to streamflow or runoff outside the permit area. In no event shall contributions be in excess of limitations set by applicable State or Federal law.

(b) Control and minimize diminution or degradation of water quality and quantity.

(c) Control and minimize erosion and siltation.

(d) Control and minimize air pollution.

(e) Prevent damage to public or private property.

§ 817.38 Restoration of roads.

(a) Unless the regulatory authority approves retention of the road as suitable for the approved post-mining land use immediately after a road becomes no longer needed for operations, reclamation, or monitoring—

(1) The road shall be closed to vehicular traffic;

(2) All bridges and culverts shall be removed;

(3) Cross drains, dikes, and water bars shall be constructed to prevent erosion;

(4) Road surfaces shall be scarified and covered with topsoil; and

(5) The area affected shall be returned to approximate original contour and revegetated in accordance with sections 817.111–817.117.

(b) Unless otherwise authorized by the regulatory authority, all road surfacing materials shall be removed and handled or conveyed and disposed of in accordance with section 817.89.

§ 817.39 Support facilities and utility installations.

(a) The support facilities required for or used incidentally to the operation of the mine, including but not limited to mine buildings, coal loading facilities at or near the mine site, coal storage facilities, equipment storage facilities, sheds, shops, and other buildings, shall be designed, constructed, and located to prevent or control erosion and siltation, water pollution, or damage to public or private property and shall comply with all the environmental and other performance standards of this Part. Support facilities shall be designed, constructed, maintained, and used in a manner which prevents, to the extent possible using the best technology currently available—

(1) Damage to fish, wildlife and related environmental values;

(2) Additional contributions of suspended solids to streamflow or runoff outside the permit area. In no event shall such contributions be in excess of limitations set by applicable State or Federal law.

(b) All underground mining activities shall be conducted in a manner which prevents damage, destruction, or disruption of services provided by oil, gas, and water wells; oil, gas, and coal-slurry pipelines; railroads; and electric and telephone lines which pass over, under, or through the permit area, unless otherwise approved by the owner and the regulatory authority.

§ 817.41 Hydrologic balance: General requirements.

(a) Underground mining activities shall be planned and conducted to minimize disturbance to the prevailing hydrologic balance in order to prevent long-term adverse changes in the hydrologic balance that could result from those activities, on both the mine plan and affected areas.

(b) Changes in water quality and quantity, in the depth to ground water, and in the location of surface water drainage channels shall be minimized so that the approved post-mining land use of the disturbed land is not adversely affected.

(c) In no case shall applicable Federal and State water-quality statutes, regulations, standards or effluent limitations be violated.

(d) Operations shall be conducted to minimize water pollution and, where necessary, treatment methods shall be used to control water pollution.

(1) Each person who conducts underground mining activities shall emphasize mining and reclamation practices that will prevent or minimize water pollution and changes in flow in preference to the use of water treatment facilities.

(2) Practices to control and minimize pollution include, but are not limited to—

(i) Stabilizing disturbed areas through land shaping;

(ii) Diverting runoff;

(iii) Achieving quickly germinating and growing stands of temporary vegetation;

(iv) Regulating channel velocity of water;

(v) Lining drainage channels with rock or vegetation;

(vi) Mulching;

(vii) Selectively placing and sealing acid-forming and toxic-forming materials;

(viii) Designing mines to prevent gravity drainage of acid waters;

(ix) Sealing;

(x) Controlling subsidence; and

(xi) Preventing acid mine drainage.

(3) If these practices are not fully adequate to meet the hydrologic requirements of this Part, the person who conducts the underground mining activities shall operate and maintain the necessary water treatment facilities for as long as treatment is required.

§ 817.42 Hydrologic balance: Water quality standards and effluent limitations.

(a) All drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted, shall be passed through a sedimentation pond, a series of sedimentation ponds, or a treatment facility before leaving the permit area. Any discharge from underground workings to surface waters shall also be passed through a sedimentation pond, a series of sedimentation ponds, or a treatment facility. Sedimentation ponds and treatment facilities for the disturbed area before being discharged into an underground working shall be maintained until drainage from the disturbed area has met the ambient surface water quality requirements of section 816.52 and the revegetation requirements of sections 817.111–817.117. Sedimentation ponds and treatment facilities for discharges from the underground mine shall be maintained until the discharge meets the effluent limitations of this section without treatment or until the discharge has ceased. The regulatory authority may grant exemptions from this requirement only when the disturbed drainage area within the total disturbed area is small, if there is no discharge from the underground mine, and if the person who conducts the underground mining activities demonstrates to the regulatory authority that sedimentation ponds and treatment facilities are not necessary to meet the effluent limitations of this section and maintain water quality in downstream receiving waters. For the purposes of this section, disturbed area shall not include those areas affected by surface operations in which only diversion ditches, sedimentation ponds, or roads are installed in accordance with this Part, and the upstream area is not other-

wise disturbed by the person who conducts the underground mining activities. Disturbed areas shall not include the area affected by underground operations unless those areas are also affected by fills, support facilities, or other major activities incident to underground mining activities. Sedimentation ponds required by this section shall be constructed in accordance with section 817.46 in appropriate locations before beginning any underground mining activities in the affected drainage area. Area in order to control sedimentation or otherwise treat discharges from areas disturbed by underground mining activities shall comply with all applicable Federal and State laws and regulations and, at a minimum, the following numerical effluent limitations:

Effluent limitations, in milligrams per liter (mg/l), except for pH

Effluent characteristics [1]	Maximum allowable [2]	Average of daily values for 30 consecutive discharge days [3]
Iron, total	7.0	3.5
Manganese, total	4.0	2.0
Total suspended solids [4]	70.0	35.0
pH [5]	Within the range 6.0 to 9.0.	

[1] To be determined according to collection and analytical procedures adopted by the United States Environmental Protection Agency's regulations for waste water analyses 40 CFR 136.

[2] Based on representative sampling.

[3] The manganese limitation shall not apply to untreated discharges which are alkaline as defined by the Environmental Protection Agency (40 CFR 434).

[4] In Arizona, Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming, total suspended solids limitations will be determined on a case-by-case basis, but they must not be greater than 45 mg/l (maximum allowable) and 30 mg/l (average of daily value for 30 consecutive discharge days) based on a representative sampling.

[5] Where the application of neutralization and sedimentation treatment technology results in inability to comply with the manganese limitations set forth, the regulatory authority may allow the pH level in the discharge to exceed to a small extent the upper limit of 9.0 in order that the manganese limitations will be achieved.

(b) A discharge from the disturbed area is not subject to the effluent limitations of this section if—

(1) The discharge is demonstrated by the discharger to have resulted from a precipitation event larger than a 10-year 24-hour precipitation event or from a snowmelt of equivalent volume; and

(2) The discharge is from facilities designed, constructed, and maintained in accordance with the applicable requirements of this Part.

(c) Adequate facilities shall be installed, operated, and maintained to treat any water discharged from the disturbed area or discharged from the underground mine so that it complies with applicable Federal and State laws or regulations or the limitations of this section. If the pH of water to be discharged from the disturbed area or mine is less than 6.0, an automatic lime feeder or other automatic neutralization process approved by the regulatory authority shall be installed, operated, and maintained. The regulatory authority may authorize the use of a manual system if it finds that—

(1) Small and infrequent treatment requirements to meet applicable standards do not require use of an automatic neutralization process;

(2) The mine normally produces less than 500 tons of run-of-mine coal per day; and

(3) Timely and consistent treatment is ensured.

§ 817.43 Hydrologic balance: Diversions and conveyance of overland flow and shallow ground water flow.

Overland flow including flow through litter, and shallow ground water flow from undisturbed areas may be diverted away from disturbed areas by means of temporary or permanent diversions if required or approved by the regulatory authority as necessary to minimize erosion and to prevent or remove water from contact with acid-forming and toxic-forming materials. The following requirements shall be met for all diversions and for all collection drains that are used to transport waters into water-treatment facilities.

(a) Temporary diversions shall be constructed to pass safely the peak runoff from a precipitation event with a 3-year recurrence interval, or a larger event is specified by the regulatory authority.

(b) To protect fills and property and to avoid danger to public health and safety, permanent diversions shall be constructed to pass safely the peak runoff from a precipitation event with a 10-year recurrence interval, or a larger event if specified by the regulatory authority. Permanent diversions shall be constructed with gently sloping banks that are stabilized by vegetation. Asphalt, concrete, or other similar linings shall not be used unless specifically required by the regulatory authority to prevent seepage or to provide stability.

(c) Diversions shall be designed, constructed, and maintained in a manner which prevents additional contributions of suspended solids to streamflow and to runoff outside the permit area, to the extent possible using the best technology currently available. Appropriate sediment control measures for these diversions shall include, but not be limited to, maintenance of appropriate gradients, channel lining, revegetation, roughness structures, and detention basins.

(d) No diversion shall be constructed on or pass through existing slides or located so as to increase the potential for slides.

(e) When no longer needed, each temporary diversion shall be removed and the affected land regraded, topsoiled, and revegetated in accordance with sections 817.24, 817.25, 817.101, and 817.111–817.117.

(f) Diversion design shall incorporate the following:

(1) Any channel lining shall be designed using standard engineering practices to safely pass the design velocities. Riprap shall comply with the requirements of paragraph 817.72(b)(5).

(2) The design freeboard shall be no less than calculated using the following equation $f=1+0.025vd$. Where f=freeboard in feet; v=design velocity, in feet per second; and d=depth of flow, in feet. Additional freeboard protection shall be provided for transition of flows and for critical areas such as swales and curves.

(3) Energy dissipators shall be installed at discharge points where diversions intersect with natural streams.

(4) Excess excavated material not necessary for diversion channel geometry or regrading of the channel shall be disposed of in accordance with 30 CFR 817.71–817.73.

(5) Topsoil shall be handled in accordance with 30 CFR 817.21–817.25.

(g) Diversions shall not be constructed or operated to divert water into underground mines without the approval of the regulatory authority under section 817.55.

§ 817.44 Hydrologic balance: Stream channel diversions.

(a) Flow from perennial and intermittent streams within the permit area may be diverted if—

(1) The diversions are approved by the regulatory authority as necessary to comply with other performance standards in this Subchapter; and

(2) The diversions are in compliance with local, State, and Federal statutes and regulations.

(b) When streamflow is allowed to be diverted, the new stream channel shall be designed, constructed, and removed in accordance with the following requirements:

(1) The longitudinal profile of the stream, the channel, and the flood plain shall be designed and constructed to remain stable and to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or to runoff outside the permit area. In no event shall the contributions be in excess of requirements set by applicable State or Federal law. Erosion control struc-

tures such as channel lining structures, retention basins, and artificial channel roughness structures shall be used in diversions only when approved by the regulatory authority as being necessary to control erosion. These structures shall be approved for permanent diversions only where they are stable and will require infrequent maintenance.

(2) Channel, bank, and flood-plain configurations shall be adequate to pass safely the peak runoff of a 24-hour precipitation event with a 10-year recurrence interval for temporary diversions and a 100-year recurrence interval for permanent diversions, or larger events as specified by the regulatory authority.

(c) When no longer needed to achieve the purpose for which they are authorized, all temporary stream channel diversions shall be removed and the affected land regraded and revegetated in accordance with the requirements of Sections 817.24, 817.25, 817.101, and 817.111–817.117. At the time diversions are removed, downstream water treatment facilities previously protected by the diversion shall be modified or removed to prevent overtopping or failure of the facilities. In no case shall this requirement relieve the person who conducts the underground mining activities from maintenance of the treatment facility if otherwise required under this Part or the permit.

§ 817.45 Hydrologic balance: Sediment control measures.

Appropriate sediment control measures shall be designed, constructed, and maintained to prevent additional contributions of sediment to streamflow or to runoff outside the permit area, to minimize erosion areas, to the extent possible using the best technology currently available. Sediment control measures include practices carried out within and adjacent to the disturbed area. The sedimentation storage capacity of practices in and downstream from the disturbed areas shall reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of proper mining and reclamation methods and sediment control practices, singly or in combination. Sediment control methods include but are not limited to—

(a) Disturbing the smallest practicable area at any one time during the mining operation through progressive backfilling, grading, and timely revegetation;

(b) Shaping the backfilled material to promote a reduction of the rate and volume of runoff in accordance with the requirements of Section 817.101.

(c) Retaining sediment within disturbed areas;

(d) Diverting runoff away from disturbed areas;

(e) Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;

(f) Using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds, and other measures that reduce overland flow velocity, reduce runoff volume, or trap sediment;

(g) Building and maintaining sedimentation ponds;

(h) Treating with chemicals; and

(i) Treating mine drainage in underground sumps.

§ 817.46 Hydrologic balance: Sedimentation ponds.

(a) *General requirements.* Sedimentation ponds shall be used individually or in series and shall—

(1) Be constructed before any disturbance of the disturbed area to be drained into the pond;

(2) Be located as near as possible to the disturbed area and out of perennial streams wherever possible;

(3) Be constructed prior to any discharge from the underground mine; and

(4) Meet all the criteria in this Section.

(b) *Sediment storage volume.* Sedimentation ponds shall provide a sediment storage volume equal to—

(1) The accumulated sediment volume from the drainage area to the pond for a minimum of 3 years or the life of the pond, whichever is greater. Sediment storage volume shall be determined using the Universal Soil Loss Equation, gully erosion rates, and sediment delivery ratio converted to sediment volume using the sediment density or other empirical methods established by the regulatory authority and based upon actual sedimentation pond studies; or

(2) 0.1 acre-foot for each acre of disturbed area within the upstream drainage area or a greater amount if required by the regulatory authority. The regulatory authority may approve a sediment storage volume of not less than 0.035 acre-foot for each acre of disturbed area within the upstream drainage area if the person who conducts the underground mining activities has demonstrated that sediment removed by other sediment control measures is equal to the reduction in sediment storage volume; and

(3) The accumulated sediment volume necessary to retain sediment for 1 year in any discharge from the underground mine passing through the pond.

(c) *Detention time.* Sedimentation ponds shall provide a 24 hour theoretical detention time for the water inflow or runoff entering the pond from a 10-year 24-hour precipitation event plus the average inflow from the underground mine. Runoff diverted in accordance with Sections 817.43 and 817.44 away from the disturbed drainage areas and not passed through the sedimentation pond, need not be considered in sedimentation pond design. In determining the runoff volume, the characteristics of the mine site, reclamation procedures, and on-site sediment control practices shall be considered.

(1) The regulatory authority may approve a theoretical detention time of not less than 10 hours, when the person who conducts the underground mining activities demonstrates that—

(i) The improvement in sediment removal efficiency is equivalent to the reduction in detention time as a result of pond design. Improvements in pond design may include but are not limited to pond configuration, in-flow and outflow facility locations, baffles to decrease in-flow velocity, and short-circuiting, and surface areas; and

(ii) The pond effluent is shown to achieve and maintain applicable effluent limitations.

(2) The regulatory authority may approve a theoretical detention time of not less than 10 hours when the person who conducts the underground mining activities demonstrates that the size distribution or the specific gravity of the suspended matter is such that applicable effluent limitations are achieved and maintained.

(3) The regulatory authority may approve a theoretical detention time of less than 24 hours to any level of detention time when the person who conducts the underground mining activities demonstrates to the regulatory authority that the chemical treatment process to be used—

(i) Will achieve and maintain the effluent limitations;

(ii) Is harmless to fish, wildlife and related environmental values;

(iii) Is planned under the supervision of a registered professional engineer; and

(iv) Shall be operated by a qualified person approved by the regulatory authority.

(4) The calculated theoretical detention time and all supporting documentation and drawings used to establish the required detention times under paragraphs (c) (1)–(3) of this section shall be included in the permit application.

(d) *Dewatering.* The water storage resulting from inflow shall be removed by a nonclogging dewatering device or a spillway approved by the regulatory authority, and shall have a discharge rate to achieve and maintain the required theoretical detention time. The

dewatering device shall not be located at a lower elevation than the maximum elevation of the design sedimentation storage volume.

(e) Each person who conducts underground mining activities shall design, construct, and maintain sedimentation ponds to prevent short-circuiting.

(f) The design, construction, and maintenance of a sedimentation pond or other sediment control measures in accordance with this Section shall not relieve the person from compliance with applicable effluent limitations.

(g) There shall be no out-flow through the emergency spillway during the passage of the runoff resulting from 10-year 24-hour precipitation event through the sedimentation pond regardless of the volume of water and sediment present from the underground mine during the runoff.

(h) Sediment shall be removed from sedimentation ponds when the volume of sediment accumulates to 60 percent of the required sediment storage volume. With the approval of the regulatory authority, additional permanent sediment storage may be provided above that required for storage if the person who conducts the underground coal mine operations demonstrates that applicable effluent limitations will be achieved and maintained. Upon the approval of the regulatory authority for those cases where additional permanent storage is provided above that required for sediment under paragraph (b) of this section, sediment removal may be delayed until the remaining volume of permanent storage has decreased to 40 percent of the required sediment storage.

(i) An appropriate combination of principal and emergency spillways shall be provided to discharge safely the runoff from a 25-year 24-hour precipitation event, or larger event as specified by the regulatory authority, plus any inflow from the underground mine. The elevation of the crest of the emergency spillway shall be a minimum of 1.0 foot above the crest of the principal spillway. Emergency spillway grades and allowable velocities shall be as specified by the regulatory authority.

(j) The minimum elevation of the top of the settled embankment shall be 1.0 foot above the water surface in the reservoir with the emergency spillway flowing at design depth. For embankments subject to settlement, this 1.0 foot minimum elevation requirement shall apply at all times including the period after settlement.

(k) The constructed height of the dam shall be increased a minimum of 5 percent over the design height to allow for settlement unless it has been demonstrated to the regulatory authority that the material used and the design will ensure against all settlement.

(l) The minimum top width of the embankment shall not be less than the quotient of $(H+35)/5$ where H is the height of the embankment as measured from the upstream toe of the embankment.

(m) The upstream and downstream side slopes of the settled embankment shall not be less than $1v:5H$ with neither slope steeper than $1v:2h$. Slopes shall be designed to be stable in all cases, even if flatter side slopes are required.

(n) The embankment foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than $1v:1h$, and the entire foundation surface scarified.

(o) The fill material shall be free of sod, large roots and other large vegetative matter, and frozen soil, and in no case shall coal processing waste be used.

(p) The placing and spreading of fill material shall be started at the lowest point of the foundation and the fill brought up in horizontal layers of such thickness as required by the regulatory authority to facilitate compaction. Compaction shall be conducted as specified by the regulatory authority in order to achieve stability.

(q) If a sedimentation pond has an embankment that is more than 20 feet in height, as measured from the upstream toe of the embankment to the crest of the emergency spillway, or has a storage volume of 20 acre-feet or more, the following additional requirements shall be met:

(1) An appropriate combination of principal and emergency spillways shall be provided to safely discharge the runoff resulting from a 100-year 24-hour precipitation event, or a larger event if specified by the regulatory authority plus any in-flow from the underground mine.

(2) The embankment shall be designed and constructed with an acceptable static safety factor of at least 1.5 or such a higher safety factor as designated by the regulatory authority to ensure stability.

(3) Appropriate barriers shall be provided to control seepage along conduits that extend through the embankment.

(r) Each pond shall be designed and inspected during construction under the supervision of, and certified after construction by, a registered professional engineer.

(s) The entire embankment including the surrounding areas disturbed by construction shall be graded, fertilized, seeded, and mulched in accordance with Sections 817.111–817.117 immediately after the embankment is completed, provided that the active upstream face of the embankment where water is being impounded may be riprapped or otherwise stabilized. Areas in which the vegetation is not successful or where rills and gullies develop shall be repaired and revegetated in accordance with Sections 817.106 and 817.111–817.117.

(t) All ponds, including those not meeting the size or other criteria of 30 CFR 77.216(a), shall be examined for structural weakness, erosion, and other hazardous conditions in accordance with the inspection requirements contained in 30 CFR 77.216-3. Each person who conducts underground mining activities shall deliver to the regulatory authority any report or notification required under 30 CFR 77.216-3 whether or not the pond meets the criteria of 30 CFR 77.216(a).

(u) Each sedimentation pond shall be removed and the affected land regraded and revegetated in accordance with Sections 817.101, 817.102 and 817.111–817.117, unless approved by the regulatory authority for retention as compatible with the approved post-mining land use. If the regulatory authority approves retention, the sedimentation pond shall meet all the requirements for permanent impoundments in Section 816.49.

§ 817.47 Hydrologic balance: Discharge structures.

Discharges from sedimentation ponds and diversions shall be controlled, using energy dissipators, surge ponds, riprap channels, and other devices where necessary to reduce erosion and prevent deepening or enlargement of stream channels and to minimize disturbances to the hydrologic balance. Discharge structures shall be designed according to standard engineering design procedures.

§ 817.48 Hydrologic balance: Acid-forming and toxic-forming materials.

(a) Drainage from acid-forming and toxic-forming underground development waste and spoil, if any, into ground and surface water shall be avoided by—

(1) Identifying, burying, and treating, where necessary, such materials which, in the judgment of the regulatory authority, may be detrimental to vegetation or that may adversely affect water quality if not treated or buried. This material shall be buried, treated or disposed of in accordance with the provisions of paragraph (c) of this Section;

(b) Preventing water from coming into contact with acid-forming and toxic-forming materials in accordance with Section 817.103, or other measures as the regulatory authority may require; and

(c) Burying or otherwise treating all acid- or toxic-forming underground development waste and spoil within 30

days after they are first exposed on the mine site, or within a lesser period if required by the regulatory authority. Temporary storage of such materials may be approved by the regulatory authority upon a finding that burial or treatment within 30 days is not feasible and that storage will not result in any material risk of water pollution or other environmental damage. If storage is approved it shall be limited to the period until burial or treatment first becomes feasible. Stored acid- and toxic-forming underground development waste and spoil materials shall be placed on impermeable material and protected from erosion and contact with surface water.

§ 817.49 Hydrologic balance: Permanent and temporary impoundments.

(a) Permanent impoundments are prohibited unless authorized by the regulatory authority. Each person who conducts underground mining activities shall demonstrate to the regulatory authority that each permanent impoundment meets the following requirements:

(1) The quality of the impounded water is suitable on a permanent basis for its intended use and discharges from the impoundment will not degrade the quality of receiving waters below water quality standards under applicable State and Federal law.

(2) The level of water will be adequately stable so as to support the intended use.

(3) Adequate safety and access to the impounded water will be provided for proposed water users.

(4) Water impoundments will not result in the diminution of the quality or quantity of water used by adjacent or surrounding landowners for agricultural, industrial, recreational, or domestic uses.

(5) The impoundment dam construction and maintenance program shall be designed to achieve stability with an adequate factor of safety compatible with structures constructed and maintained under 16 U.S.C. 1006 Pub. L. 83-566. Standards for structures built under this law are contained in the Soil Conservation Service Practice Standard 378, "Pond," and Technical Release No. 60, "Earth Dams and Reservoirs," and are hereby incorporated by reference. These standards are available in all OSM offices. These materials are incorporated as they exist on the date of adoption of this Part, and notices of changes in these materials will be published periodically in the FEDERAL REGISTER.

(6) The size of the impoundment is adequate for its intended purposes.

(7) The impoundment will be suitable for the approved post-mining land use.

(b) Temporary impoundments of water in which the water is impounded in a dam shall meet the requirements of Section 817.46(e)-(q).

§ 817.50 Hydrologic balance: Ground water protection.

(a) To control mine drainage, surface entries, and accesses to underground workings, including adits and slopes, shall be located, designed, constructed, and utilized in such a manner as to prevent or control gravity discharge of water from the mine.

(b) Gravity discharge of water from an underground mine, other than a drift mine subject to paragraph (c) of this Section, may be allowed by the regulatory authority if—

(1) The discharge satisfies the water effluent limitations of 30 CFR 817.42 and all applicable State and Federal water quality standards;

(2) The person who conducts the underground mining activities demonstrates to the regulatory authority that changes in the hydrologic balance are minimal and post-mining land uses will not be adversely affected; and

(3) The discharge conveys mine wastes to a treatment facility in the permit area and the following conditions are met—

(i) All water discharged from the treatment facility meets the effluent limitations established in Section 817.42 and all applicable State and Federal water quality standards; and

(ii) Consistent maintenance of the treatment facility is ensured for the anticipated period of gravity discharge.

(c) Notwithstanding anything to the contrary in paragraphs (a) and (b) of this section, all openings for drift mines first used after the implementation of a State or Federal program and which are located in acid-producing or iron-producing coal seams, shall be located in such a manner as to prevent any gravity discharge from the mine.

(d) The regulatory authority may require physical, chemical and mineralogical analyses of coal bearing strata, aquifers, underground development wastes, spoil, mine wastes or other materials.

§ 817.52 Hydrologic balance: Surface and ground water monitoring.

(1) *Ground water.* Ground water levels, infiltration rates, subsurface flow and storage characteristics, and the quality of ground water shall be monitored in the manner required by the regulatory authority to determine the effects of underground mining activities on the recharge capacity of reclaimed lands and on the quantity and quality of water in ground water systems at the mine site and in adjacent areas.

(2) When operations may affect the ground water system, ground water levels and ground water quality shall be periodically monitored using measurements from a sufficient number of wells and mineralogical and chemical analyses of aquifer, overburden, and spoil material adequately to reflect changes in ground water quantity and quality resulting from these operations. The monitoring shall be adequate to plan for modification of the underground mining activities if necessary to minimize disturbance to the hydrologic balance.

(3) As specified and approved by the regulatory authority, the person who conducts the underground mining activities shall conduct additional hydrologic tests, including drilling, infiltration tests and aquifer tests, and the results shall be submitted to the regulatory authority to demonstrate compliance with Section 817.51.

(b) *Surface water.*

(1) Surface water monitoring shall be conducted in accordance with the monitoring program submitted under 30 CFR 784.13(b)(4) and approved by the regulatory authority. Monitoring shall—

(i) Be adequate to measure accurately and record water quantity and quality of discharges from the permit area;

(ii) In all cases in which analytical results of the sample collections indicate a violation of a permit condition or applicable standard has occurred, result in the operator notifying the regulatory authority immediately. Where a National Polluant Discharge Elimination System (NPDES) permit effluent limitation has been violated, the person who conducts the underground mining activities shall forward a copy of the Discharge Monitoring Report, EPA Form 3320-1, concurrently with notification of the violation;

(iii) Result in regular reports to the regulatory authority within 60 days of the end of each 60 day sample collection period; or

(iv) If the discharge for which water monitoring reports are required, is subject to regulation by a National Pollutant Discharge Elimination System (NPDES) permit issued under the Clean Water Act of 1977 (30 U.S.C. 1251-1378) which includes equivalent reporting requirements and requires filing of the water monitoring reports within 90 days or less of sample collection, the person who conducts the underground mining activities shall submit to the regulatory authority on the same time schedule as required by the NPDES permit or within 90 days following sample collection, whichever is earlier, either—

(A) A copy of the completed reporting form filed to meet NPDES permit requirements; or

(B) A letter identifying the State or Federal Government official with whom the reporting form was filed to meet NPDES permit requirements and the date of filing.

(2) After disturbed areas have been regraded and stabilized according to this Part, the person who conducts underground mining activities shall monitor surface water flow and quality. Data from this monitoring shall be used to demonstrate that the quality and quantity of runoff without treatment is consistent with the requirement of this Section to minimize disturbance to the prevailing hydrologic balance and with the requirements of this Part to attain the approved postmining land use. These data shall provide a basis for approval by the regulatory authority for removal of water quality or flow control systems and for determining when the requirements of this Section are met. The regulatory authority shall determine the nature of data, frequency of collection, and reporting requirements.

(3) Equipment, structures, and other devices necessary to measure and sample accurately the quality and quantity of surface water discharges from the affected area, shall be properly installed, maintained, and operated and shall be removed when no longer required.

§ 817.53 Hydrologic balance: Transfer of wells.

(a) An exploratory or monitoring well may only be transferred for use as a water well with the prior approval of the regulatory authority. The surface owner shall submit a written request to the regulatory authority for approval of any well transfer.

(b) Upon an approved transfer of a well, the transferee shall—

(1) Assume primary liability for damages to persons or property from the well;

(2) Plug the well when necessary, but in no case later than abandonment of the well; and

(3) Assume primary responsibility for compliance with Sections 817.13-817.15 with respect to the well.

(c) Upon transfer of a well, the transferor shall—

(1) Be secondarily liable for damages;

(2) Be secondarily liable for plugging the well; and

(3) Be secondarily liable for compliance with Section 816.13-816.15 with respect to the well.

(d) Nothing in this Section shall be deemed to supersede or affect the applicability of any State law requirements with respect to a well transfer.

§ 817.54 Hydrologic balance: Water rights and replacement.

Any person who conducts in underground mining activities shall replace the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where the water supply has been affected by contamination, diminution, or interruption resulting from the underground mining activities.

§ 817.55 Hydrologic balance: Discharge of water into an underground mine.

Water from an underground mine shall not be discharged into other underground mine workings unless the person who conducts the underground mining activities demonstrates to the satisfaction of the regulatory authority that the discharge—

(a) Abates water pollution or otherwise eliminates public hazards resulting from underground mining activities;

(b) Is conveyed as a controlled flow; and

(c) Meets the water quality requirements of 817.42 for pH and total suspended solids except that the total suspended solid concentrations may be exceeded if the suspended material is approved by the regulatory authority or is limited to—

(1) Coal processing waste;

(2) Underground mine development waste;

(3) Fly ash from a coal-fired facility;

(4) Acid mine drainage sludge;

(5) Flue gas desulfurization sludge; or

(6) Inert materials used for stabilizing underground mines; and

(d) The discharge will not cause, result in, or contribute to a violation of applicable water quality standards.

(e) Minimizes disturbance to the hydrologic balance.

§ 817.56 Hydrologic balance: Post-mining rehabilitation of sedimentation ponds, diversions, impoundments and treatment facilities.

Before abandoning the permit area, the person who conducts the underground mining activities shall restore all permanent sedimentation ponds, diversions, impoundments and treatment facilities to meet the original design criteria for permanent structures or impoundments.

§ 817.57 Hydrologic balance: Stream buffer zones.

(a) No surface or underground area within 100 feet of a perennial stream or a stream with a macro-invertebrate biological community shall be disturbed by underground mining activities except in accordance with Section 817.44 unless the regulatory authority specifically authorizes underground mining activities closer to or through such a stream upon finding—

(1) That the original stream channel will be restored; and

(2) During and after the mining, the water quantity and quality from the stream section within 100 feet of the underground mining activities shall not be adversely affected.

(b) The area not to be disturbed shall be designated a buffer zone and marked as specified in Section 817.11.

§ 817.59 Coal recovery.

Underground mining activities shall be conducted so as to maximize the utilization and conservation of the coal so that reaffecting the land in the future through surface coal mining operations is minimized.

§ 817.61 Use of explosives: General requirements.

(a) Each person who conducts underground mining activities shall comply with all applicable local, State, and Federal laws and regulations and the requirements of Sections 816.61-816.68, in the storage, handling, preparation, and use of explosives.

(b) Blasting operations at areas affected by surface operations and facilities that use more than the equivalent of 5 pounds of TNT shall be conducted according to a time schedule approved by the regulatory authority.

(c) All blasting operations shall be conducted by experienced, trained, and competent persons who understand the hazards involved. Each person responsible for blasting operations shall—

(1) Have demonstrated a knowledge of, and shall comply with, MSHA safety requirements and U.S. Department of Treasury security requirements;

(2) Be capable of using mature judgment in all situations;

(3) Be in good physical condition and not addicted to intoxicants, narcotics, or other similar types of drugs;

(4) Possess current knowledge of the local, State, and Federal laws and regulations applicable to the work; and

(5) Possess a valid certificate of completion of training and qualification as required by 30 CFR 850 and 851.

§ 817.62 Use of explosives: Pre-blasting survey.

(a) On the request to the regulatory authority by a resident or owner of a man-made dwelling or structure that is located within one-half mile of any part of the permit area, the person who conducts the underground mining activities shall conduct a pre-blasting survey of the dwelling or structure and submit a report of the survey to

the regulatory authority and to the person requesting the survey.

(b) Each person who conducts underground mining activities shall utilize personnel approved by the regulatory authority to conduct the survey to determine the condition of the dwelling or structure and to document any pre-blasting damage and other physical factors that could reasonably be affected by the blasting. Assessments of structures such as pipes, cables, transmission lines, and wells and other water systems shall be limited to surface condition and readily available data. Special attention shall be given to the pre-blasting condition of wells and other water systems used for human, animal, or agricultural purposes and to the quantity and quality of the water.

(c) A written report of the survey shall be prepared and signed by the person who conducted the survey. The report shall include recommendations of any special conditions or proposed adjustments to the blasting procedure which should be incorporated into the blasting plan to prevent damage. Copies of the report shall be provided to the person requesting the survey and to the regulatory authority.

§ 817.65 Use of explosives: Surface blasting requirements.

(a) The provisions of this Section apply only to blasting conducted on the surface.

(b) A resident or owner of a man-made dwelling or structure that is located within one-half mile of any area affected by surface operations or facilities shall be notified 24 hours prior to any blasting event required for facing-up operations.

(c) All blasting shall be conducted between sunrise and sunset. The regulatory authority may specify more restrictive time periods based on public requests or other considerations including the proximity to residential areas.

(d) Warning and all-clear signals of different character that are audible within a range of one-half mile from the point of the blast shall be given. Each person within the permit area and each person who resides or regularly works within one-half mile of the permit area shall be notified of the meaning of the signals through appropriate instructions. These instructions shall be periodically delivered or otherwise communicated in a manner which can reasonably be expected to inform such persons of the meaning of the signals. Each person who conducts underground mining activities shall maintain signs in accordance with Section 817.11(f).

(e) Access to the blasting area shall be regulated to protect the public and livestock from the effects of blasting. Access to the blasting area shall be controlled to prevent unauthorized entry at least 10 minutes before each blast and until an authorized representative of the person who conducts the underground mining activities has reasonably determined—

(1) That no unusual circumstances, such as imminent slides or undetonated charges, exist; and

(2) That access to and travel in or through the area can safely resume.

(f) Areas in which explosives are awaiting firing shall be guarded, barricaded and either posted or flagged against unauthorized entry.

(g) (1) Airblast shall be controlled so that it does not exceed the values specified below at any dwelling, public building, school, church, or commercial or institutional building, unless such building is owned or leased by the person who conducts the underground mining activities and is located within the permit area:

Lower Frequency Limit of Measuring System, Hz (±3 dB)	Maximum Level in dB
0.1 Hz or lower—flat response	135 peak.
2 Hz or lower—flat response	132 peak.
6 Hz or lower—flat response	130 peak.
C-weighted, slow response	109°C.

(2) In all cases except the C-weighted slow, the systems used must have a flat frequency response of at least 500 Hz at the upper end. The C-weighted must meet the standard ANSI S1.4-1971 specifications. The ANSI S1.4-1971 is hereby incorporated by reference. This work is incorporated as it exits on the date of adoption of this Part, and notice of changes made in these materials will periodically be published in the FEDERAL REGISTER. ANSI S1.4-1971 is available for inspection in OSM regional offices and in OSM's office in the Department of the Interior, 18th and C Streets NW., Washington, D.C. 20240.

(3) The person who conducts blasting may satisfy the provisions of this section by meeting any one of the four specifications in the chart in paragraph (g)(1) of this Section.

(h) Except where lesser distances are approved by the regulatory authority based upon a pre-blasting survey or other appropriate investigations, blasting shall not be conducted within—

(1) 1,000 feet of any building used as a dwelling, school, church, hospital, or nursing facility;

(2) 500 feet of facilities including, but not limited to, disposal wells, petroleum or gas-storage facilities, municipal water-storage facilities, fluid-transmission pipelines, gas or oil-collection lines, or water and sewage lines; and

(3) 500 feet of the active workings of an underground mine except with the concurrence of the Mine Safety and Health Administration.

(i) Flyrock from blasting shall be restricted as follows:

(1) No flyrock shall be cast beyond the line of property owned or leased by the person who conducts the underground mining activities without the consent of the landowners of adjacent areas.

(2) No flyrock shall be cast more than half the distance from the blast to the nearest dwelling, public building, school, church, commercial or institutional building, road, or railroad. This shall not apply to any structure or right-of-way on land owned by the person who conducts the underground mining activities and not leased to any other person;

(3) No flyrock shall be cast beyond the area of regulated access required under paragraph (e) of this Section; and

(4) These restrictions shall apply to material which travels along the ground surface as well as that which travels through the air.

(j) Blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in the course, channel, or availability of ground or surface waters outside the permit area.

(k) In all blasting operations, except as otherwise authorized in this Section, the maximum peak particle velocity shall not exceed 1 inch per second at the location of any dwelling, public building, school, church, or commercial or institutional building. The regulatory authority may reduce the maximum peak particle velocity allowed if it determines that a lower standard is required because of density of population or land use, age or type of structure, geology or hydrology of the area, frequency of blasts, or other factors.

(l) The maximum peak particle velocity does not apply to property within the permit area that is owned by the person who conducts the underground mining activities and is not leased to any other person.

(m) An equation for determining the maximum weight of explosives that can be detonated within any 8-millisecond period is in paragraph (n) of this Section. If the blasting is conducted in accordance with this equation, the velocity is deemed to be within the 1 inch per second limit.

(n) (1) The maximum weight of explosives to be detonated within any 8 millisecond period may be determined by the formula $W=(D/60)^2$ where W=the maximum weight of explosives, in pounds, that can be detonated in any 8-millisecond period, and D=the distance, in feet, to the nearest

dwelling, school, church, or commercial or institutional building.

(2) For distances between 300 and 5,000 feet, solution of the equation results in the following maximum weight:

Distance, in feet (*D*):	*Max. weight, in pounds* (*W*)
300	25
350	34
400	44
500	69
600	100
700	136
800	178
900	225
1,000	278
1,100	336
1,200	400
1,300	469
1,400	544
1,500	625
1,600	711
1,700	803
1,800	900
1,900	1,002
2,000	1,111
2,500	1,736
3,000	2,500
3,500	3,403
4,000	4,444
4,500	5,625
5,000	6,944

(o) If on a particular site the peak particle velocity exceeds one-half inch per second after a period of 1 second following the maximum ground particle velocity, the blasting procedures shall be revised to limit the ground motion.

(p) Electric or electric delay systems combining surface delays with in-hole delays may be used to reduce vibrations of approved by the regulatory authority. Requests to use such systems shall be accompanied by blasting reports and seismograph records of test blasting on the site showing that the delay pattern does not produce peak particle velocities in violation of this Section.

§ 817.67 Use of explosives: Seismographic measurements.

(a) Where a seismograph is used to monitor the velocity of ground motion and the peak particle velocity limit of 1 inch per second is not exceeded, the equation in Section 817.65(n) need not be used. If the equation is not being used, a seismographic record shall be obtained for each shot.

(b) The use of a modified equation to determine maximum weight of explosives for blasting operations at a particular site may be approved by the regulatory authority on receipt of a petition accompanied by reports including seismograph records of test blasting on the site. In no case shall the regulatory authority approve the use of a modified equation where the peak particle velocity of 1 inch per second required in Section 817.65(k) would be exceeded.

(c) The regulatory authority may require a seismograph record of any or all blasts.

§ 817.68 Use of explosives: Records of blasting operations.

A record of each blast, including seismograph reports, shall be retained for at least 3 years and shall be available for inspection by the regulatory authority and the public on request. The record shall contain the following data:

(a) Name of the person conducting the blast.

(b) Location, date, and time of blast.

(c) Name, signature, and license number of blaster-in-charge.

(d) Direction and distance, in feet, to the nearest dwelling, school, church, or commercial or insitutional building either—

(1) Not located in the permit area; or

(2) Not owned nor leased by the person who conducts the underground mining activities.

(e) Weather conditions.

(f) Type of material blasted.

(g) Number of holes, burden, and spacing.

(h) Diameter and depth of holes.

(i) Types of explosives used.

(j) Total weight of explosives used.

(k) Maximum weight of explosives detonated within any 8 millisecond period.

(l) Maximum number of holes detonated within any 8 millisecond period.

(m) Methods of firing and type of circuit.

(n) Type and length of stemming.

(o) Mats or other protections used.

(p) Type of delay detonator and delay periods used.

(q) Seismographic records, where required, including the calibration signal of the gain setting and—

(1) Seismograph reading, including exact location of seismograph and its distance from the blast;

(2) Name of the person taking the seismograph reading; and

(3) Name of person and firm analyzing the seismograph record.

§ 817.71 Disposal of underground development waste and excess spoil: General requirements.

(a) Underground development waste and spoil not required to achieve the approximate original contour and which cannot be used as backfill in the underground mine shall be hauled or conveyed to and placed in designated disposal areas within a permit area other than mine working or excavations, only if the disposal areas are authorized for such purposes in the approved mining and reclamation permit and only in accordance with Sections 817.71–817.73. The material shall be placed in a controlled manner to ensure—

(1) That leachate and surface runoff will not degrade surface or ground waters or exceed the effluent limitations of Section 817.42;

(2) Stability of the fill; and

(3) The land mass is suitable for reclamation and revegetation compatible with the natural surroundings.

(b) The fill shall be designed using recognized professional standards, certified by a registered professional engineer, and approved by the regulatory authority.

(c) All vegetative and organic materials shall be removed from the disposal area and the topsoil shall be removed, segregated and replaced under Sections 817.21–817.23 before spoil is placed in the disposal area. If approved by the regulatory authority, organic material may be used as mulch or may be included in the topsoil to control erosion, to promote growth of vegetation or to increase the moisture retention of the soil.

(d) Slope protection shall be provided to minimize surface erosion at the site. All disturbed areas including diversion ditches that are not riprapped shall be vegetated upon completion of construction.

(e) The disposal areas shall be located on the most moderate sloping and naturally stable areas available as approved by the regulatory authority. If such placement provides additional stability and prevents mass movement, fill materials suitable for disposal shall be placed upon or above a natural terrace, bench, or berm.

(f) The fill materials shall be hauled or conveyed and placed in a controlled manner, concurrently compacted as necessary to ensure mass stability and prevent mass movement, covered, and graded to allow surface and sub-surface drainage to be compatible with the natural surroundings, to ensure long-term stability.

(g) The final configuration of the fill must be suitable for post-mining land uses approved in accordance with Section 816.124 except that no depressions or impoundments shall be allowed on the completed fill.

(h) Terraces shall not be constructed unless approved by the regulatory authority.

(i) Where the slope in the disposal area exceeds 1v:2.8h (36 percent), or such lesser slope as may be designed by the regulatory authority based on local conditions, keyway cuts (excavations to stable bedrock), or rock toe buttresses shall be constructed to stabilize the fill. The slope of original ground at the toe of the fill shall not exceed 1v:5h (20 percent).

(j) The fill shall be inspected for stability by a registered engineer or other professional specialist approved by the regulatory authority during critical construction periods and at least quar-

terly throughout construction to ensure removal of all organic material and topsoil, placement of underdrainage systems, proper installation of surface drainage systems, proper placement and compaction of fill materials, and proper revegetation. The registered engineer or other qualified professional specialist shall provide to the regulatory authority a certified report within 2 weeks after each inspection that the fill has been constructed as specified in the design approved by the regulatory authority, and a copy of the report shall be retained at the minesite by the person who conducts the underground mining activities.

(k)(1) Coal processing waste shall not be disposed of in head of hollow fills and may be disposed of in underground development waste or excess spoil fills if such waste is—

(i) Placed in accordance with Section 817.85;

(ii) Demonstrated to be non-toxic and non-acid forming; and

(iii) Demonstrated to be consistent with the design stability of the fill.

(2) Wastes other than coal processing wastes shall be disposed of in accordance with Section 817.89.

(l) The disposal area shall not contain springs, natural water courses, or wet weather seeps unless lateral drains are constructed from the wet areas to the underdrains in a manner that prevents infiltration of the water into the spoil pile.

(m) If any portion of the fill interrupts, obstructs, or encroaches upon any natural drainage channel, the entire fill is classified as a valley or head-of-hollow fill and must be designed and constructed in accordance with the requirements of Sections 817.72 and 817.73, respectively.

(n) The foundation and abutments of the fill shall be stable under all conditions of construction and operation. Sufficient foundation investigations and laboratory testing of foundation materials shall be performed in order to determine the design requirements for stability of the foundation. Analyses of foundation condtions shall include the effect of underground mine workings, if any, upon the stability of the structure.

(o) The regulatory authority shall direct the person who conducts the underground mining activities to modify the fill to mitigate potential harm, if the regulatory authority determines that—

(1) The fill construction does not meet the requirements set out in this or following Sections, if applicable;

(2) The fill is not constructed in accordance with satisfactory engineering standards;

(3) The fill poses an imminent threat of failure; or

(4) Scientific or engineering studies demonstrate that the fill poses an unreasonable threat of failure.

(p) Modification required under paragraph (o) of this Section may include regrading, change of construction technique, abandonment, or removal of the fill.

(q) Underground development waste and excess spoil way be returned to underground workings only in accordance with the program submitted to and approved by the regulatory authority under 30 CFR 784.18.

§ 817.72 Disposal of underground development waste and excess spoil: Valley fills.

Valley fills shall meet all of the requirements of Section 817.71 and the additional requirements of this Section.

(a) The fill shall be designed to attain a long-term static factor of safety of 1.5, based upon data obtained from subsurface exploration, geotechnical testing, foundation design, and accepted engineering analyses.

(b) A sub-drainage system for the fill shall be constructed in accordance with the following:

(1) A system of underdrains constructed of durable rock shall—

(i) Be installed along the natural drainage system;

(ii) Extend from the toe to the head of the fill; and

(iii) Contain lateral drains to each area of potential drainage or seepage.

(2) A filter system to ensure the proper functioning of the rock underdrain system shall be designed and constructed using standard geotechnical engineering.

(3) In constructing the underdrains, no more than 10 percent of the rock may be less than 12 inches in size and no single rock may be larger than 25 percent of the width of the drain. Rock used in underdrains shall meet the requirements of paragraph (a) (5) of this Section.

(4) The minimum size of the main underdrain shall be:

Total amount of fill material	Predominant type of fill material	Minimum size of drain, in feet	
		Width	Hgt.
Less than 1 million cubic yards.	Sandstone..	10	4
Do	Shale	16	8
More than 1 million cubic yards.	Sandstone..	16	8
Do	Shale	16	16

(5) Rock used shall not have less than 50 percent wear in 500 revolutions in the Los Angeles Rattler Test (AASHTO T-96-70), shall not have less than 15 percent by weight loss in 5 cycles of the Sodium Sulfate Test (ASTM C-88, AASHTO T-104), and shall not contain less than 30 percent by volume of clay or clay minerals as determined by standard petrologic analytical tests, and shall not be acid-forming or toxic-forming.

(c)(1) Underground development waste and excess spoil shall be hauled or conveyed and placed in a controlled manner and concurrently compacted as specified by the regulatory authority in lifts no thicker than 18 inches in order to—

(i) Achieve the densities designed to ensure mass stability;

(ii) Prevent mass movement;

(iii) Avoid contamination of the rock underdrain or rock core; and

(iv) Prevent formation of voids.

(2) The person who conducts the underground mining activities may use lifts of greater thickness than required under paragraph (c) (1) of this Section if he has demonstrated to the regulatory authority by density monitoring tests that the density throughout the thickness of the lift is equal to or greater than the density specified in the design referred to in paragraph (a) of this Section, except that in no event shall lift thickness exceed 4 feet.

(d) Surface water runoff from the area above the fill shall be diverted away from the fill and into stabilized diversion channels designed to pass safely the runoff from the 24-hour duration 100-year frequency storm or larger event specified by the regulatory authority. Sediment control structures shall be provided at the discharge of the diversion ditch before entry into the natural water course in accordance with Section 817.46. Surface runoff from the fill surface shall be diverted to stabilized channels off the fill which will safely pass runoff from a 24-hour duration, 100-year frequency storm. Diversion design shall comply with the requirements of Section 817.43(f).

(e) The tops of the fill and any terrace constructed to stabilize the face, shall be graded no steeper than lv:20h (5 percent). The vertical distance between terrace shall not exceed 50 feet.

(f) Drainage shall not be directed over the outslope of the fill.

(g) The outslope of the fill shall not exceed lv:2h (50 percent). The regulatory authority may require a flatter slope.

§ 817.73 Disposal of underground development waste and excess spoil: Head-of-hollow fills.

Disposal of underground development waste and excess spoil in the head-of-hollow fill shall meet all standards set forth in Sections 817.71 and 817.72 and the additional requirements of this Section.

(a) The fill shall be designed to completely fill the disposal site approved by the regulatory authority to the ap-

proximate elevation of the ridgeline. A rock-core chimney drain may be utilized instead of the subdrain and surface diversion system required for valley fills. If the crest of the fill is not approximately at the same elevation as the low point of the adjacent ridgeline, the fill must be designed as specified in Section 817.72, with diversion of runoff around the fill.

(b) The alternative rock-core chimney drain system shall be designed and incorporated into the construction of head-of-hollow fills as follows:

(1) The fill shall have along the vertical projection of the main buried stream channel or rill, a vertical core of durable rock at least 16 feet thick which shall extend from the toe of the fill to the head of the fill and from the base of the fill to the surface of the fill. A system of lateral rock underdrains shall connect this rock core to each area of potential drainage or seepage in the disposal area. Rocks used in the rock core and underdrains shall meet the requirements of Section 817.72(b).

(2) A filter system to insure the proper functioning of the rock core shall be designed and constructed using standard geotechnical engineering methods.

(3) The grading may drain surface water away from the outslope of the fill and toward the rock core. The maximum slope of the top of the fill shall be lv:33h (3 percent). Instead of the requirements of Section 817.71(g), a drainage pocket may be maintained at the head of the fill during and after construction to intercept surface runoff and discharge the runoff through or over the rock drain if stability of the ffil is not impaired. In no case shall this pocket or sump have a potential for impounding more than 10,000 cubic feet of water. Terraces on the fill shall be graded with a 3- to 5-percent grade toward the fill and a 1-percent slope toward the rock core.

(c) The drainage control system shall be capable of safely passing the runoff from a 24-hour 100-year frequency storm, or larger event, as specified by the regulatory authority.

§ 817.81 Coal processing waste banks: General requirements.

(a) All coal processing waste shall be hauled or conveyed and placed in new and existing disposal areas which shall be within the permit area and which are approved by the regulatory authority for this purpose. The coal processing waste disposal area shall be designed, constructed and maintained—

(1) In accordance with Sections 817.71 and 817.72, the provisions of this Section and Sections 817.82-817.88; and

(2) To prevent combustion.

(b) Coal processing waste materials from activities outside the permit area such as other mines or abandoned mine waste piles may be disposed of in permit areas only if approved by the regulatory authority. The approval shall be based on a showing by the person who conducts underground mining activities, using hydrologic, geologic, physical, and chemical analyses, that disposal of these materials does not—

(1) Adversely affect water quality, water flow, or vegetation;

(2) Create public health hazards; and

(3) Cause instability in the disposal areas.

§ 817.82 Coal processing waste banks: Site inspection.

(a) All coal processing waste disposal sites shall be inspected by an engineer or other person approved by the regulatory authority.

(1) The inspections shall occur at least once each week beginning within 7 days after preparation of the disposal area begins and terminating when the coal processing waste bank has been graded, covered in accordance with Section 817.85 and topsoil has been distributed on the bank in accordance with Section 817.24 or for such longer period as the regulatory authority may require.

(2) The inspections shall include such observations and tests as may be necessary to evaluate the potential hazard to human life and property, to ensure that all organic material and topsoil have been removed and that proper construction and maintenance are occurring in accordance with the plan submitted under 30 CFR 780.35 and approved by the regulatory authority.

(3) The engineer or other approved inspector shall consider steepness of slopes, seepage, and other visible factors which could indicate potential failure and shall consider the results of failure with respect to the threat to human life and property.

(4) Copies of the inspection findings shall be maintained at the mine site.

(b) If any inspection discloses that a potential hazard exists, the regulatory authority shall be informed promptly of the finding and of the action procedures formulated for public protection and remedial action in the event of an emergency. If adequate emergency procedures cannot, for any reason, be formulated or implemented then the regulatory authority shall be notified immediately. The regulatory authority shall then notify the appropriate emergency agencies that emergency procedures are required for the coal processing waste area.

§ 817.83 Coal processing waste banks: Water control measures.

(a) A properly designed sub-drainage system shall be provided and shall—

(1) Comply with the provisions of Sections 817.71 and 817.72.

(2) Be covered so as to protect against the entrance of surface water or leachate from the coal processing waste.

(b) All surface drainage from the area above the coal processing waste bank and from the crest and face of the waste disposal area shall be diverted in accordance with Section 817.72(d).

(c) Slope protection shall be provided to minimize surface erosion at the site. All disturbed areas including diversion ditches that are not riprapped shall be vegetated upon completion of construction.

(d) All water discharged from a coal processing waste bank shall comply with the regulations of Section 817.42.

§ 817.85 Coal processing waste banks: Construction requirements.

(a) The coal processing waste banks shall be constructed in compliance with Sections 817.71 and 817.72 and this Section.

(b) Coal processing waste banks shall have a minimum static factor of safety of 1.5.

(c) Compaction requirements during construction or modification of all coal processing waste banks shall meet the requirements of this paragraph, instead of those specified in Section 817.72(c). The coal processing waste shall be—

(1) Spread in layers no more than 8 inches in thickness; and

(2) Compacted to attain 90 percent of the maximum dry density in order to prevent spontaneous combustion and to provide the strength required for stability of the coal processing waste bank. Dry densities shall be determined in accordance with ASSHTO T-99, or equivalent.

(d) Following grading of the coal processing waste bank, the site shall be covered with a minimum of 4 feet of the best available non-toxic and non-combustible material in accordance with Section 817.22(e) and in a manner that does not impede flow from sub-drainage systems.

§ 817.86 Coal processing waste: Burning.

(a) Coal processing waste fires shall be extinguished by the person who conducts the underground mining activities, in accordance with a plan approved by the regulatory authority.

(b) Extreme caution shall be taken in all attempts to extinguish burning wastes to ensure that no hazards will exist to equipment operators or other persons working or living in the vicinity of the site.

(c) Acceptable techniques for extinguishing burning wastes may include, but are not limited to the following—

(1) Quenching with surface applications of water;

(2) Isolation of burning wastes by excavation;

(3) Exclusion of oxygen by blanketing or sealing with water, foam or other materials; and

(4) Injecting water or slurry to isolate and quench the wastes.

§ 817.87 Coal processing waste: Burned waste utilization.

(a) Before the person who conducts the underground mining activities may remove burned coal processing waste or other materials or refuse from a disposal area, approval shall be obtained from the regulatory authority. A plan regarding the method of removal, with maps and appropriate drawings to illustrate the proposed sequence of the operation and methods of compliance with this Part, shall be submitted to the regulatory authority. Consideration shall be given in the plan to potential hazards which may be created to persons working or living in the vicinity of the structure. The plan shall be certified by a qualified engineer.

(b) Burned coal processing waste may be utilized for offsite construction purposes with the approval of the regulatory authority.

§ 817.88 Coal processing waste: Return to underground workings.

Coal processing waste may be returned to underground mine workings only in accordance with the waste disposal program approved by the regulatory authority under 30 CFR 780.35.

§ 817.89 Disposal of non-coal wastes.

(a) Non-coal wastes including, but not limited to, grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, timber and other combustables generated during underground mining activities shall be placed and stored in a controlled manner in a designated area to ensure that leachate and surface runoff do not degrade surface or ground water, fires are prevented, and the area remains stable and is suitable for reclamation and revegetation compatible with the natural surroundings.

(b) The final disposal of non-coal wastes shall be in a designated disposal site. The solid waste disposal site shall be designed and constructed with appropriate barriers on the bottom and sides of the designated site. The wastes shall be routinely compacted and covered to prevent combustion and wind born waste. When the disposal is completed or when the underground mining activites are completed, a minimum of 2 feet of soil cover shall be placed over the site. The operation of the disposal site shall be conducted in accordance with all local, State, and Federal requirements.

(c) At no time shall the person who conducts allow any solid waste material to be deposited at refuse embankments or impoundment sites nor shall the person who conducts the underground mining activities allow any solid waste disposal excavation to be placed within 8 feet of any coal outcrop or coal storage area.

§ 817.91 Coal processing waste: Dams and embankments: General requirements.

Sections 817.91–817.93 apply to existing and proposed dams and embankments constructed of coal processing waste or intended to impound coal processing wastes.

(a) All dams and embankments including those not meeting the size or other criteria of 30 CFR 77.216(a), shall be routinely inspected by a registered professional engineer, or someone under the supervision of a registered professional engineer, in accordance with Mine Safety and Health Review Commission regulations in 30 CFR Section 77.316-3.

(b) All dams and embankments subject to this section shall be routinely maintained. Vegetative growth shall be cut where necessary to facilitate inspection and repairs. Ditches and spillways shall be cleaned. Any combustible materials present on the surface, other than that used for surface stability such as mulch or dry vegetation, shall be removed and any other appropriate maintenance procedures followed.

(c) All dams and embankments subject to this section shall be inspected and certified annually as having been constructed and modified in accordance with current prudent engineering practices to minimize the possibility of failures. Any changes in the geometry of the dam or embankment shall be highlighted and included in the annual certification report. These certifications shall include a report on—

(1) Existing and required monitoring procedures and instrumentation;

(2) The average and maximum depths and elevations of any impounded waters over the past year;

(3) Existing storage capacity of the dam or embankment;

(4) Any fires occurring in the material over the past year; and

(5) Any other aspects of the dam or embankment affecting stability.

(d) A person who conducts underground mining activities shall submit to the regulatory authority plans for any enlargements, reductions in size, re-construction or other modification of impounding structures. Except where change is required to eliminate an emergency condition, the regulatory authority shall have approved the plans before alterations begin.

§ 817.92 Coal processing waste: Dams and embankments: Site preparation.

Before coal processing waste is placed at a dam or embankment:

(a) Clearing and grubbing of all trees, shrubs, grasses, and other organic material shall be performed and all combustibles shall be removed and stockpiled in accordance with the requirements of this Part.

(b) All surface drainage shall be diverted away from the crest and downstream face of the dam or embankment. Diversion ditches shall be designed and constructed, utilized, and maintained to prevent blockage and to pass the peak runoff from a 24-hour precipitation event with a 100-year recurrence interval unless greater event is specified by the regulatory authority. Sediment control structures shall be provided at the discharge of each diversion ditch before entry into natural water courses in accordance with Sections 817.4–817.55.

(c) Slope protection shall be provided to minimize surface erosion at the site and sediment control structures shall be required. All disturbed areas including diversion ditches that are not riprapped shall be vegetated upon completion of construction.

§ 817.93 Coal processing waste: Dams and embankments: Construction.

(a) Waste shall not be used in the construction of dams and embankments unless demonstrated through appropriate engineering analysis to have no adverse effect on stability, and approved by the regulatory authority.

(b) The design of the dam or embankment shall be based on the flood from the probable maximum precipitation event unless the person who conducts the underground mining activities shows that the failure of the dam or embankment would not cause loss of life or severely damage property or the environment, in which case and depending on site conditions, a design to safely pass the flow from a 100-year precipitation event may be specified by the regulatory authority.

(c) One or more spillways shall be provided for the dam or embankment to pass that portion of the design storm that cannot be safely stored. Spillways and outlet works shall be designed to provide adequate protection against erosion. Inlets shall be protected against blockage.

(d) The design freeboard distance between the lowest point on the embankment crest and the maximum water elevations shall be at least 3 feet.

(e) Dams and embankments shall have minimum safety factors as follows:

Case	Loading condition	Minimum safety factor
I	End of construction	1.3
II	Partial pool with steady seepage saturation.	1.5
II	Steady seepage from spillway or decant crest.	1.5
IV	Earthquake (cases II and III with seismic loading).	1.0

(f) The dam or embankment foundation and abutments shall be stable under all conditions of construction and operation of the impoundment. Sufficient foundation investigations and laboratory testing shall be performed to determine the factors of safety of the dam or embankment for all loading conditions in paragraph (e) of this Section and for all increments of construction.

(g) Allowances shall be made for settlement of the dam or embankment and the foundation so that the freeboard will be maintained.

(h) Dams or embankments created for impounding waste materials shall be subject to a minimum drawdown criteria that allows the facility to be evacuated by spillways or decants of 90 percent of the volume of water stored during the designed precipitation event within 10 days.

(i) For each dam and embankment a permanent identification number, at least 6 feet high shall—

(1) Show the permit number for the underground coal mining and reclamation operations;

(2) Show the name of the person operating or controlling the dam; and

(3) Be located on or immediately adjacent to each dam.

§ 817.95 Air resources protection.

(a) *Fugitive dust.* Each person who conducts underground mining activities shall plan and employ fugitive dust control measures as an integral part of site preparation, coal mining, and reclamation operations. The regulatory authority shall specify the control measures appropriate for use in planning, according to applicable Federal and State air quality standards, climate, existing air quality in the area affected by mining, and the available control technology.

(b) *Control measures.* The fugitive dust control measures to be used, depending on applicable Federal and State air quality standards, the climate, existing air quality, size of the operation, and type of operation shall include, but not be limited to—

(1) Periodic watering of unpaved roads with the minimum frequency of watering specified according to a quantitative standard approved by the regulatory authority;

(2) Chemical stabilization of unpaved roads with nontoxic soil cements or dust pallatives mixed into the upper 1 or 2 inches or more of the road surface;

(3) Paving of roads;

(4) Prompt removal of coal, rock, soil, and other dust-forming debris from roads and frequent scraping and compaction of unpaved roads to stabilize the road surface;

(5) Restricting the speed of vehicles to reduce the length and size of any fugitive dust caused by travel;

(6) Revegetating, mulching, or otherwise stabilizing all areas adjoining roads that are sources of fugitive dust;

(7) Restricting the travel of vehicles on other than established roads;

(8) Enclosing, covering, watering or otherwise treating loaded haul trucks and railroad cars to reduce loss of material to wind and spillage;

(9) Substituting of conveyor systems for haul trucks and covering of conveyor systems when conveyed loads are subjected to wind erosion;

(10) Minimizing the area of disturbed land;

(11) Prompt revegetation of regraded lands;

(12) Use of alternatives for coal-handling methods, restriction of dumping procedures, wetting of disturbed materials during handling, and compaction of disturbed areas;

(13) Planting of special windbreak vegetation at critical points in the permit area.

(14) Control of dust from drilling using water sprays, hoods, dust collectors, or other controls;

(15) Restricting the areas to be blasted at any one time to reduce fugitive dust;

(16) Restricting activities causing fugitive dust during periods of air stagnation;

(17) Extinguishing any areas of burning or smoldering coal and periodically inspecting for burning areas whenever the potential for spontaneous combustion is high; and

(18) Reducing the period of time between initially disturbing the soil and revegetating or other surface stabilization.

(19) Restricting fugitive dust at spoil and coal transfer and loading points with water sprays, negative pressure systems and baghouse filters, chemicals, or other practices.

(c) *Additional measures.* Where the regulatory authority determines the application of fugitive-dust control measures listed in paragraph (b) of this Section is insufficient to achieve and maintain applicable Federal and State air quality standards, the regulatory authority may require additional measures and practices as may be necessary to ensure compliance with all applicable air quality standards.

(d) *Monitoring.* Air-monitoring equipment shall be installed and monitoring shall be conducted in accordance with the air-quality monitoring program submitted to and as approved by the regulatory authority.

§ 817.97 Protection of fish, wildlife and related environmental values.

(a) Any person conducting underground mining activities shall, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts of the operation on fish, wildlife and related environmental values, and achieve enhancement of such resources where practicable.

(b) A person who conducts underground mining activities shall promptly report to the regulatory authority the presence in the permit area of any critical habitat of a threatened or endangered species listed by the Secretary, any plant or animal listed as threatened or endangered by the State, or any bald or golden eagle, of which the person conducting underground mining activities becomes aware and which was not previously reported to the regulatory authority.

(c) A person who conducts underground mining activities shall ensure that the design and construction of telephone lines, electric power lines, distribution lines, and other transmission facilities on the permit area are in accordance with the guideline set forth in "Environmental Criteria for Electric Transmission System" (USDI, USDA (1970)) or in such alternative guidance manuals as may be approved by the regulatory authority. Distribution lines shall be designed and constructed in accordance with REA Bulletin 61-10 "Powerline Contacts by Eagles and Other Large Birds" or in such alternative guidance manuals as may be approved by the regulatory authority. The two works named in this paragraph are hereby incorporated by reference. These materials are incorporated as they exit on the date of adoption of this Part, and notices of changes in these materials will periodically be published in the Federal Register. These two works are available at all OSM Regional Offices and at the OSM Office in Washington, D.C. and on file at the Office of the Federal Register.

(d) Each person who conducts underground mining activities shall to the extent possible using the best technology currently available—

(1) Locate and operate haul and access roads so as to avoid or minimize impacts to important fauna species or other species protected by State or Federal law;

(2) Fence roadways where specified by the regulatory authority to guide locally important wildlife to roadway underpasses or overpasses and construct the necessary passages. No new barrier shall be created in known and important fauna migration routes;

(3) Fence, cover, or use other appropriate methods to exclude fauna from ponds which contain hazardous concentrations of toxic-forming materials;

(4) Restore, enhance, or avoid habitats of unique value for fauna;

(5) Restore, enhance, or maintain natural riparian vegetation on the banks of streams, lakes, and other wetland areas;

(6) Avoid intermittant stream channels undisturbed or restore them to natural, meandering shapes of the same gradient;

(7) Avoid perennial stream channels undisturbed or restore them to their former longitudinal profile and cross section including fauna habitat (usually a pattern of riffles, pools, and drops rather than a uniform depth).

(8) Advise all permanent and contractual personnel of pertinent State and Federal laws and regulations pertaining to fauna resources;

(9) Not use persistent pesticides on the area during underground mining and reclamation activities;

(10) Make every effort to prevent, control, and suppress range forest and coal fires;

(11) If fauna habitat is to be a primary or secondary post-mining land use, the operator shall, in addition to the requirements of 30 CFR 316.111-316.117—

(i) Select plant species to be used on reclaimed areas based on the following criteria—

(A) Their proven nutritional value for fauna;

(B) Their uses as cover for fauna; and

(C) Their ability to support and enhance fauna habitat after release of bonds; and

(ii) Distribute flora groupings to maximize benefit to fauna. Flora should be grouped and distributed in a manner which optimizes edge effect, cover, and other benefits for fauna;

(12) Where row crops are to be the primary land use, surround fields with rows of trees or hedges suitable for reducing wind, retaining moisture and providing habitat for birds and other small animals and where desirable intersperse trees, wetlands, other vegetation types, and fence rows, throughout the harvested area to break up large blocks of monoculture and to diversify habitat types to make them more suitable for small animals. Wetlands shall be preserved or created rather than drained or otherwise permanently abolished; and

(13) Where the primary land use is to be residential, public service, or industrial land use, intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs and trees useful as food and cover for birds and small animals.

§ 817.99 Slides and other damage.

At any time a slide occurs which may have a potential adverse effect on life, property, health, safety, or the environment in the permit area, the person who conducts the underground mining activities shall notify the regulatory authority by the fastest available means and shall comply with any remedial measures required by the regulatory authority.

§ 817.100 Contemporaneous reclamation.

Reclamation efforts including backfilling, grading, topsoil replacement and revegetation or all areas affected by surface operations shall occur as contemporaneously as practicable with mining operations.

§ 817.101 Backfilling and grading: General requirements.

(a) Surface areas disturbed incident to underground mining activities shall be backfilled and graded in accordance with the time schedule approved by the regulatory authority.

(b) Backfilling and grading. (1) All areas affected by surface operations shall be returned to approximate original contour. Each person who conducts underground mining activities shall haul or convey, backfill, and compact (where advisable to ensure stability or to prevent leaching) and grade all spoil to eliminate all highwalls, spoil piles, and depressions.

(2) Backfilled material shall be placed to minimize adverse effects on ground water to minimize offsite effects and to support the approved post-mining land use.

(3) The post-mining graded slope need not be uniform.

(4) Cut-and-fill terraces may be used only in those situations expressly identified in Section 817.102.

§ 817.102 Backfilling and grading: General grading requirements.

(a) The final graded slopes shall not exceed in grade either the approximate pre-mining slope or any lesser slopes approved by the regulatory authority based on consideration of soil, climate, or other characteristics of the surrounding area. Post-mining final graded slopes need not be uniform but shall approximate the general nature of the pre-mining topography. The requirements of this Section may be modified by the regulatory authority where the underground mining activities are reaffecting previously mined lands that have not been restored to the standards of this Part and sufficient spoil is not available. The person who conducts underground mining activities shall, at a minimum—

(1) Retain all overburden and spoil on the solid portion of existing or new benches; and

(2) Backfill and grade to the most moderate slope possible to eliminate the highwall which does not exceed the angle of repose or such lesser slopes as is necessary to achieve a minimum static safety factor of 1.3. In all cases the highwall shall be eliminated.

(b) On approval by the regulatory authority and in order to conserve soil moisture, ensure stability, and control erosion on final graded slopes, cut-and-fill terraces may be allowed if the terraces are compatible with the approved post-mining land use and are appropriate substitutes for construction of lower grades on the reclaimed lands. The terraces shall meet the following requirements:

(1) The width of the individual terrace bench shall not exceed 20 feet unless specifically approved by the regulatory authority as necessary for stability, erosion control, or roads included in the approved post-mining land use plan.

(2) The vertical distance between terraces shall be as specified by the regulatory authority to prevent excessive erosion and to provide long-term stability.

(3) The slope of the terrace outslope shall not exceed $1v:2h$ (50 percent). Outslopes which exceed $1v:2h$ (50 percent) may be approved if they have a minimum static safety factor of more than 1.3 and provide adequate control over erosion and closely resemble the surface configuration of the land prior to mining. In no case may highwalls be left as part of terraces.

(4) Culverts and underground rock drains shall be used on the terrace only when approved by the regulatory authority.

(c) Small depressions may be constructed if they—

(1) Are approved by the regulatory authority to minimize erosion, conserve soil moisture or promote vegetation;

(2) Do not restrict normal access; and

(3) Are not inappropriate substitutes for lower grades on the reclaimed lands.

(d) All operations on slopes above 20° or on lesser slopes that the regulatory authority defines as a steep slope shall meet the provisions of 30 CFR Part 826.

(e) All final grading, preparation of overburden before replacement of topsoil, and placement of topsoil, in accordance with Section 817.24, shall be done along the contour to minimize

subsequent erosion and instability. If such grading, preparation or placement along the contour is hazardous to equipment operators then grading, preparation or placement in a direction other than generally parallel to the contour may be used. In all cases, grading, preparation, or placement shall be conducted in a manner which minimizes erosion and provides a surface for replacement of topsoil which will minimize slippage.

§ 817.103 Backfilling and grading: Covering coal and acid- and toxic-forming materials.

(a) *Cover.* (1) A person who conducts underground mining activities shall cover, with a minimum of 4 feet of the best available non-toxic and non-combustible material all exposed coal seams remaining after mining and any acid-forming, or toxic-forming, combustible materials, or any other materials identified by the regulatory authority, that are exposed, used, or produced during mining.

(2) If necessary, these materials shall be treated to neutralize toxicity in order to prevent water pollution and sustained combustion, and to minimize adverse effects on plant growth and land uses.

(3) Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local conditions, the regulatory authority shall specify thicker amounts of cover using non-toxic material.

(4) Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution.

(b) *Stabilization.* Backfilled materials shall be selectively hauled or conveyed and compacted wherever necessary to prevent leaching of acid-forming and toxic-forming materials into surface or ground waters and wherever necessary to ensure the stability of the backfilled materials. The method of compacting material and the design specifications shall be approved by the regulatory authority before the acid-forming and toxic-forming materials are covered.

§ 817.106 Regrading or stabilizing rills and gullies.

When rills or gullies deeper than 9 inches form in areas that have been regraded and topsoiled the rills and gullies shall be filled, graded, or otherwise stabilized and the area reseeded or replanted the areas according to Sections 817.111-817.117. The regulatory authority shall specify that rills or gullies of lesser size be stabilized if the rills or gullies are disruptive to the approved post-mining land use or may result in additional erosion and sedimentation.

§ 817.111 Revegetation: General requirements.

(a) Each person who conducts underground mining activities shall establish on all areas affected by surface operations and facilities diverse, effective, and permanent vegetative cover of species native to the area of affected land or species that supports the approved post-mining land uses. For areas designated as prime farmlands, the reclamation requirements of 30 CFR Part 823 shall apply.

(b) All revegetation shall be in compliance with the plan approved by the regulatory authority and shall be carried out in a manner that encourages a prompt vegetative cover and recovery of productivity levels compatible with the approved post-mining land use.

(1) All disturbed lands, except water areas and surface areas of roads that are approved as a part of the post-mining land use, shall be seeded or planted to achieve a vegetative cover of the same seasonal variety native to the area of disturbed land.

(2) The vegetative cover shall be capable of stabilizing the soil surface with respect to erosion.

(3) Vegetative cover shall be considered of the same seasonal variety when it consists of a mixture of species of equal or superior utility for the intended land use when compared with the utility of naturally occurring vegetation during each season of the year.

(4) If both the pre-mining and the post-mining land use is intensive, agriculture, planting of the crops and normally grown will meet the requirement of paragraph (b)(1) of this Section.

§ 817.112 Revegetation: Use of introduced species.

Introduced species may be substituted for native species only if approved by the regulatory authority after appropriate field trials have demonstrated that the introduced species are of equal or superior utility for the approved post-mining land use, or are necessary to achieve a quick, temporary, and stabilizing cover. Introduced species shall meet applicable State and Federal seed or introduced species statutes, and shall not include poisonous or toxic species.

§ 817.113 Revegetation: Timing.

Seeding and planting of disturbed areas shall be conducted during the first normal period for favorable planting conditions after final preparation. The normal period for favorable planting shall be that planting time generally accepted locally for the type of plant materials selected. Any disturbed areas, except water areas and surface areas of roads approved for the post-mining land use, which have been final graded and topsoiled shall be mulched as required by Section 817.114 and seeded, if required by the regulatory authority, with a temporary cover of small grains, grasses, or legumes to control erosion until an adequate permanent cover is established.

§ 817.114 Revegetation: Mulching.

(a) Suitable mulch shall be used on all regraded and topsoiled areas to control erosion, to promote germination of seeds, and to increase the moisture retention of the soil. Mulch shall be anchored to the soil surfaces to ensure effective protection of the soil and vegetation.

(b) Annual grasses and grains such as oats, rye, and wheat may be used instead of mulch when the regulatory authority determines that they will provide adequate stability and that they will later be replaced by species approved for the post-mining land use.

§ 817.115 Revegetation: Grazing.

When the approved post-mining land use is rangeland or pastureland, the reclaimed land shall be used for livestock grazing at a stocking rate equal to or less than approved by the regulatory authority for at least the last two full years of liability required under Section 817.116(b).

§ 817.116 Revegetation: Standards for success.

(a) Success of revegetation shall be measured by the techniques approved by the regulatory authority on the basis of the reference areas approved by the regulatory authority. This is to adjust for natural differences between the pre-mining years and post-mining years. Management of the reference area shall be comparable to that which is required for the approved post-mining land use of the mine plan area.

(b) The ground cover and productivity of living plants on the revegetated area shall be equal to the ground cover and productivity of living plants on the same approved reference area before mining for:

(i) Each year of a period of 5 full consecutive years after the last year of augumented seeding, fertilizing, irrigation, or other major work that ensures success in areas of more than 26.0 inches average annual precipitation; or

(ii) Each year of a period of 10 full consecutive years after the last year of augmented seeding, fertilizing, irrigation, or other major work that ensures success in areas of less than or equal to 26.0 inches average annual precipitation.

(2) For purposes of paragraphs (b)(1)(i) and (ii) of this section, the average annual precipitation shall be determined either—

(i) By interpolation, using standard interpolation techniques, from "Mean Annual Precipitations," Map, p. 97, The National Atlas of the United States, U.S. Department of the Interior, Geological Survey, 1970. This work is hereby incorporated by reference as it exists on the date of adoption of this Subchapter. Notices of changes in this atlas will periodically be published in the Federal Register. The atlas is available at all OSM offices and is on file in the Office of the Federal Register; or

(ii) Based on 10 years of continuous and reliable precipitation records from stations located in or adjacent to the permit area.

(3) The ground cover shall be considered equal if it is at least 90 percent of the ground cover or productivity of the reference area with 90 percent statistical confidence and with 80 percent statistical confidence on shrublands for any significant portion of the mined area. A lower percentage of ground cover and productivity may be authorized by the regulatory authority under the following standards:

(i) For previously mined areas that are not reclaimed to the performance standards in this subchapter, the ground cover of living plants for the areas shall not be less than can be supported by the best available topsoil and overburden in the mine plan area and in no case less than that existing before redisturbance;

(ii) For areas to be developed for industrial or residential use less than 2 years after regrading is completed the ground cover of living plants shall not be less than required to control erosion; and

(iii) Success in revegetation of cropland shall be determined on the basis of crop production from the mined area compared to the reference area. Crop production from the mined area shall be equal to that of the approved reference area for a minimum of two growing seasons. Production shall not be considered equal if it is less than 90 percent of the production of the reference area for any significant portion of the mined area.

(c) The person who conducts underground mining activities shall:

(1) Maintain any necessary fences and proper management practices; and

(2) Conduct periodic measurements of vegetation, soils, and water prescribed or approved by the regulatory authority to identify conditions during the applicable period of liability specified in paragraph (b) of this Section.

§ 817.117 Revegetation: Tree stocking for forest land.

This Section sets forth forest resource conservation standards for reforested operations to ensure that a cover of trees of commercial species, sufficient to adequately use the available growing space, is established after underground mining activities.

(a) The following are the minimum acceptable stocking standards for areas east of the 100th meridian west longitude as measured 5 years after planting:

(1) The area contains an average point count of six hundred trees per acre, to be computed as follows:

(i) 600 established trees of commercial species per acre at least 3 years of age each, each one to count as one toward meeting the stocking requirements; and

(ii) Root crown or root sprouts over one foot in height shall count as one toward meeting the stocking requirement.

(2) Rock areas, permanent roads, and surface water drainage ways in forest land shall not require stocking.

(3) A "countable tree" means a tree that can be used in calculating the degree of stocking under the following criteria:

(i) The tree shall be in place at least three growing seasons;

(ii) The tree shall be alive and healthy;

(iii) The tree shall have at least one-third of its length in live crown;

(iv) The tree shall be a commercial species which the regulatory authority determines will produce commerical trees physiologically suited for the area.

(4) Stocking means a measure of the degree to which space is occupied by well-distributed countable trees.

(b) The following are the minimum standards for areas west of the 100th meridian west longitudes where shelterbelts, fauna habitat, commercial forestland, or other forestlands are to be used for post-mining land use.

(1) A pre-mining and post-mining vegetation inventory of trees, shrubs and half-shrubs shall be conducted on established reference areas according to methods approved by the regulatory authority. This inventory shall contain, but not be limited to—

(i) Site quality;

(ii) Stand size;

(iii) Stand condition;

(iv) Site and species relations; and

(v) Appropriate forest/land utilization considerations.

(2) Appropriate trees, shrubs and half-shrubs on the revegetated area shall be measured using the approved methods after the vegetation has been established according to the approved mining and reclamation plan. The density, number per unit area, of live woody plants which have been in place at least 3 years on the rehabilitated area shall be equal to or greater than 90 percent of the density of live woody plants of the same life form (trees vs. shrubs and half-shrubs) on the reference area with ninety (90) percent statistical confidence. When this ground cover requirement is met, the five or ten year responsibility period required in Section 817.116 shall begin

(3) Upon expiration of the five or ten year responsibility period and at the time of request for bond release, each person who conducts underground mining activities shall provide documentation required in paragraph (a) of this section showing that the woody plants established on the rehabilitated site meet the requirements of the approved mining and reclamation plan. Species diversity, distribution, seasonal variety, vigor and regenerative capacity of the vegetation of the revegetated area shall be evaluated on the basis of the results which could reasonably be expected using the methods of revegetation in the approved mining and reclamation plan.

§ 817.121 Subsidence control: General requirements.

Underground mining activities shall be planned and conducted so as to prevent subsidence from causing material damage to the surface, to the extent technologically and economically feasible, and so as to maintain the value and foreseeable use of surface lands. This may be accomplished by leaving adequate coal in place, backfilling, or other measures to support the surface or by mining in such a manner that provides for planned and controlled subsidence.

§ 817.122 Subsidence control: Public notice.

The mining schedule shall be published in a newspaper of general circulation in the area of the mine and distributed by mail to all owners of property or residents within the affected and adjacent areas at least every 6 months during active mining operations. The mining schedule shall contain at a minimum:

(a) Identification of specific areas in which mining will take place;

(b) Dates of mining activities that could cause subsidence and affect specific structures;

(c) The probable surface effects on structures;

(d) Measures to be taken to prevent or control adverse surface effects; and

(e) The opportunity for surface owners to request a pre-mining survey of dwellings and structures.

§ 817.123 Subsidence control: Pre-mining survey.

(a) On a request to the regulatory authority by an owner of any dwelling or structure within the mine plan area and adjacent area likely to be affected by subsidence, the operator shall conduct a pre-mining survey of the dwelling or structure and shall submit a report of the survey to the regulatory authority. A pre-mining survey shall be conducted of all public buildings including but not limited to churches, schools, hospitals, and public utilities or municipal public service operations including highways, dams, and cemeteries.

(b) Personnel approved by the regulatory authority shall be used to conduct the survey to determine the condition of the dwelling or structure and to document any pre-mining damage and determine other physical factors that could reasonably be affected by subsidence resulting from mining. Assessments of structures such as roads, dams, pipelines, cables, transmission lines, and wells, ditches, and other water systems shall be limited to surface condition and other readily available data. Special attention shall be given to the pre-mining condition of springs, wells, reservoirs, and other water systems used for human, animal, or agricultural purposes and to quantity and quality of the water.

(c) A written report of the survey shall be prepared and signed by the person who conducted the survey and prepared the written report. The report shall include recommendations of any special conditions or proposed adjustments to the subsidence control procedures outlined in Section 817.122 which should be adopted to prevent material damage. Copies of the report shall be provided to the surface owner requesting the survey and to the regulatory authority.

§ 817.124 Subsidence control: Surface owner protection.

Each person who conducts underground mining activities, unless that person is the owner of overlying surface and adjacent lands subject to subsidence damage or holds a valid and specific waiver of surface damage for such lands from the present owner, shall consult with the owner of any dwelling or structure on such lands before conducting any underground mining activities.

§ 817.125 Subsidence control: Monitoring.

(a) Each person who conducts underground mining activities shall comply with the subsidence monitoring plan approved by the regulatory agency under 30 CFR 784.19.

(b) The regulatory authority may require the establishment of special monuments near sensitive structures and may require special measurements at different time and precision limits.

(c) An initial subsidence report shall be submitted to the regulatory authority with the permit application, and for mines in existence on the date of implementation of a State or Federal program no later than 8 months after the date of such implementation. The report shall describe the condition of the surface overlying each mine and nearby lands subject to subsidence due to underground mining activities at the time of the initial survey. This report shall be updated annually on the basis of additional surveys and shall contain comprehensive documentation of horizontal and vertical changes of monuments.

(d) If reasonable access for surveying is denied by the surface owner of lands subject to subsidence, the regulatory authority may modify the requirements of this Section as appropriate.

(e) If, on the basis of a detailed study of subsurface conditions, the regulatory authority determines that subsidence will be negligible, the monitoring requirements may be modified but shall, in any event, require detailed surveys before and after mining, or as specified in paragraph (c) of this Section.

§ 817.126 Subsidence control: Buffer zones.

(a) Underground mining activities shall not be conducted beneath or adjacent to any intermittent or perennial stream, or impoundment having a storage volume of 20 acre-feet or more, unless the regulatory authority on the basis of detailed subsurface information determines that subsidence will not cause material damage to the water body and associated structures. If subsidence exceeds the limitations approved in the mining permit, additional support or backfill material shall be placed to prevent additional subsidence from occurring.

(b) Underground mining activities beneath any aquifer that serves as the sole source of water supply to any municipal water system shall be conducted so as to avoid disruption of the aquifer and consequent exchange of ground water between the aquifer and other strata. The regulatory authority may prohibit mining in the vicinity of such aquifers or may limit the percentage of coal extraction in the interest of protecting water supplies.

(c) Underground mining activities shall not be conducted beneath or in close proximity to any public buildings including but not limited to churches, schools, hospitals, courthouses and government offices unless the regulatory authority on the basis of detailed subsurface information determines that subsidence will not cause material damage to these structures and specifically authorizes the mining.

§ 817.131 Cessation of operations: Temporary.

(a) Each person who conducts underground mining activities shall in areas in which there are no current operations, but operations are to be resumed under an approved plan, effectively support and close all surface access openings to underground operations, and secure surface facilities. Temporary abandonment shall not relieve a person of his obligation to comply with provisions of his approved mining and reclamation operations permit.

(b) Before temporary cessation of operations and reclamation, each person who conducts underground mining activities shall submit to the regulatory authority a notice of intention to cease or abandon operations and reclamation. This notice shall include a statement of the exact number of acres affected in the permit area, the extent and kind of reclamation accomplished, and identification of the regrading, revegetation, environmental monitoring, and water treatment activities that will continue during the temporary cessation.

§ 817.132 Cessation of operations: Permanent.

(a) The person who conducts underground mining activities shall close or backfill or otherwise permanently reclaim all affected areas in accordance with this Chapter and according to the plan approved by the regulatory authority.

(b) All equipment, structures, or other facilities not required for continued underground mining activities and monitoring unless approved as suitable for the post-mining land use, shall be removed and the affected lands reclaimed.

§ 817.133 Post-mining land use.

(a) *General.* All affected areas shall be restored in a timely manner—

(1) To conditions that are capable of supporting the use which they were capable of supporting before any mining;

(2) To higher or better uses achievable under criteria and procedures of this Section.

(b) *Determining pre-mining use of land.* The pre-mining uses of land to which the post-mining land use is compared shall be those uses which the land previously supported if the land had not been previously mined and had been properly managed.

(1) The post-mining land use for land that has been previously mined and not reclaimed shall be judged on the basis of the highest and best use

that can be achieved and is compatible with surrounding areas.

(2) The post-mining land use for land that has received improper management shall be judged on the basis of the pre-mining use of surrounding lands that have received proper management.

(3) If the pre-mining use of the land was changed within 5 years of the beginning of mining, the comparison of post-mining use to pre-mining use shall include a comparison with the historic use of the land as well as its use immediately preceding mining.

(c) Before permanent abandonment, the permit area shall be restored, in a timely manner, either to conditions capable of supporting the uses they were capable of supporting before any mining or to conditions capable of supporting approved alternative land uses. Alternative land uses may be approved by the regulatory authority after consultation with the landowner or the land-management agency having jurisdiction over the lands, if the following criteria are met:

(1) The proposed post-mining land use is compatible with adjacent land use and, where applicable, with existing local, State, or Federal land use policies and plans. A written statement of the views of the authorities with statutory responsibilities for land use policies and plans shall have been submitted to the regulatory authority before underground mining activities began. Any required approval of local, State, or Federal land management agencies, including any necessary zoning or other changes required for the land use, shall have been obtained and shall remain valid throughout the underground mining activities.

(2) Specific plans shall be prepared and submitted to the regulatory authority which show the feasibility of the post-mining land use as related to needs, projected land use trends, and markets and that include a schedule showing how the proposed use will be developed and achieved within a reasonable time after mining and be sustained. The regulatory authority may require appropriate demonstrations to show that the planned procedures are feasible, reasonable, and integrated with mining and reclamation, and that the plans will result in successful reclamation.

(3) Provision of any necessary public facilities shall be ensured as evidenced by letters of commitment from parties other than the person who conducts underground mining activities, as appropriate, to provide them in a manner compatible with the plans submitted under 30 CFR 780.15. The letters shall be submitted to the regulatory authority before surface mining activities begin.

(4) Specific and feasible plans are submitted to the regulatory authority which show that financing and attainment and maintenance of the post-mining land use are feasible and are supported by letters of commitment from parties other than the person who conducts the underground mining activities.

(5) Plans for the post-mining land use shall have been designed under the general supervision of a registered professional engineer, or other appropriate professional, who will ensure that the plans conform to applicable accepted standards for adequate land stability, drainage, and vegetative cover, and esthetic design appropriate for the post-mining use of the site.

(6) The proposed use or uses will neither present actual or probable hazard to public health or safety nor will they pose any actual or probable threat of water flow diminution or pollution.

(7) The use or uses will not involve unreasonable delays in reclamation.

(8) Necessary approval of measures to prevent or mitigate adverse effects on fish, wildlife and related environmental values shall have been obtained from the regulatory authority and appropriate State and Federal fish and wildlife management agencies before surface mining activities begin.

(9) Proposals to change pre-mining land uses of range, fish and wildlife habitat, forestland, hayland, or pasture to a post-mining cropland use, where the cropland would require continuous maintenance such as seeding, plowing, cultivation, fertilization, or other similar practices to be practicable or to comply with applicable Federal, State, and local laws, have been reviewed by the regulatory authority to ensure that—

(i) There is a firm written commitment by the person who conducts underground mining activities or by the landowner or land manager to provide sufficient crop management after release of applicable performance bonds to ensure that the proposed post-mining cropland use remains practical and reasonable;

(ii) There is sufficient water available and committed to maintain crop production; and

(iii) Topsoil quality and depth are sufficient to support the proposed use.

PART 818—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—CONCURRENT SURFACE AND UNDERGROUND MINING

Sec.

818.1 Scope.
818.2 Objective.
818.4 Responsibility of regulatory authority.
818.11 Applicability.
818.12 Criteria for a variance to remain valid.
818.13 Review of variance.
818.15 Compliance with variance terms.
818.16 Additional performance standards.
818.18 Limits of variance.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 506, 508, 515, 516, Pub. L. 95-87, 91 stat. 448, 449, 467, 470, 471, 473, 478, 486, 495 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1256, 1258, 1565, 1266).

§ 818.1 Scope.

This Part sets forth the minimum performance standards each person who combines surface mining activities with underground mining activities shall comply with under a variance from the requirement that reclamation efforts proceed as contemporaneously as practicable for specific areas within the reclamation plan.

§ 818.2 Objective.

The objective of this Part is to ensure the maximum practicable recovery of mineral resources and to avoid multiple disturbances of the surface areas.

§ 818.4 Responsibility of regulatory authority.

The regulatory authority shall review and grant or deny requests for variances from the requirement that reclamation efforts proceed as contemporaneously as practicable in accordance with 30 CFR 785.18.

§ 818.11 Applicability.

A variance applies only to those specific areas within the reclamation plan that the applicant shows to be necessary for implementing the proposed concurrent operations and that the regulatory authority approves. The variance is effective for any area only for the time necessary to facilitate the underground mining authorized.

§ 818.12 Criteria for a variance to remain valid.

A variance from the requirement that reclamation proceed as contemporaneously as practicable for specific areas within the permit area is valid for combined surface mining and underground mining activities if the following criteria are met:

(a) Each person who conducts these activities submits to the regulatory authority specific, feasible plans for the proposed underground mining activities.

(b) The underground mining activities are necessary or desirable to ensure maximum practical recovery of the mineral resource and avoid multiple disturbance of the surface areas.

(c) The plan for the underground mining activities conforms to the requirements for underground mining in 30 CFR 817 and the permits necessary for the underground mining activities have been issued by the regulatory authority.

(d) The specific areas within the reclamation plan which are proposed to be included in the variance are necessary for the proposed underground mining activities.

(e) No substantial adverse environmental damage, either on-site or off-site, results from the delay in completion of reclamation otherwise required in 30 CFR 816 and 817; and

(f) Provisions for the off-site storage of spoil will comply with 30 CFR 816.71–816.73.

§ 818.13 Review of variance.

The regulatory authority shall review each variance granted under this Part not more than three years from the date the permit is issued. The regulatory authority shall decide whether to renew, revise, or revoke the variance, based on the permittee's compliance with the terms of the variance.

§ 818.15 Compliance with variance terms.

(a) Each person who conducts operations under a variance issued under 30 CFR 785.18 shall comply with all applicable performance standards in this Subchapter and any State or Federal program in effect, except to the extent that—

(1) Non-compliance is specifically authorized in the permit variance; and

(2) Non-compliance is necessary to achieve the purposes for which the variance is granted.

(b) Each person who conducts operations under a variance issued under 30 CFR 785.18 shall comply with each term and condition of the variance as set forth in the permit.

§ 818.16 Additional performance standards.

In addition to the performance standards of 30 CFR 816 and 817, each person who conducts combined operations shall comply with the following performance standards:

(a) A 500-foot barrier pillar of coal shall be maintained between the surface and underground operations in any one seam. The regulatory authority and the Mine Safety and Health Administration may approve a lesser distance after a finding by the regulatory authority that the approved operations result in—

(1) Improved resources recovery;

(2) Abatement of water pollution; or

(3) Elimination of hazards to the health and safety of the public.

(b) The vertical distance between surface and underground mines working separate seams shall be sufficient to provide for the health and safety of the workers and to prevent surface water from entering the underground workings.

(c) No operations under a variance granted under 30 CFR 785.18 shall reduce the protection provided public health and safety below the level of protection required for surface coal mining and reclamation operations conducted without a variance.

§ 818.18 Limits of variance.

A variance under this Part shall apply only to those portions of the permit area identified in the permit variance terms.

PART 819—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—AUGER MINING

Sec.
819.1 Scope.
819.2 Objectives.
819.11 Auger mining: Additional performance standards.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 510, 515, 517, 701 Pub. L. 95-87, 91 stat, 448, 449, 467, 470, 471, 480, 486, 498, 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1260, 1265, 1267, 1291).

§ 819.1 Scope.

This Part sets forth additional performance standards for auger mining, which is a surface mining extraction method under the Act and performance standards of this Subchapter.

§ 819.2 Objectives.

The objectives of this Part are to—

(a) Prevent the additional adverse environmental effects of auger mining; and

(b) Prevent any unnecessary loss of coal reserves.

§ 819.11 Auger mining: Additional performance standards.

(a) Any auger mining associated with a surface coal mining operation shall be conducted to maximize recoverability of mineral reserves remaining after mining and reclamation operations are complete. Each person who conducts auger mining activities shall leave areas of undisturbed coal to provide access for future underground mining unless the regulatory authority determines that it is not practicable to recover the remaining coal reserves. Unmined sections shall be—

(1) A minimum of 250 feet wide at any point between the auger openings to the full depth of the auger holes;

(2) No more than 2,500 feet apart measured from the center of one unmined section to the center of the next unmined section unless a greater distance is set forth in the reclamation plan approved by the regulatory authority;

(3) In multiple seam mining, the unmined section shall be increased in width by 50 feet for each subjacent workable seam and the centers of all unmined sections shall be aligned vertically; and

(4) No auger hole shall be closer than 500 feet in horizontal distance to any abandoned or active underground mine except as approved by the regulatory authority and the Mine Safety and Health Administration after a finding by the regulatory authority that the approved operation results in improved resources recovery, abatement of water pollution, or elimination of hazards to the health and safety of the public.

(b) In order to prevent pollution of surface and ground water and to reduce fire hazards, each auger hole, except as provided by paragraph (c) of this section, shall be plugged so as to prevent discharge of water and access of air to the coal as follows:

(1) Each auger hole discharging water containing toxic or acid-forming material shall be plugged within 72 hours after completion by backfilling and compacting noncombustible and impervious material into the hole to a depth sufficient to form a water-tight seal.

(2) Each auger hole not discharging water shall be sealed as in paragraph (b) (1) of this Section to close the opening within 30 days following completion.

(c)(1) An auger hole need not be plugged if the regulatory authority finds—

(i) the impoundment of the water which would result from plugging the hole may create a hazard to the environment or public health or safety;

(ii) that drainage from the auger hole will not pose a threat of pollution to surface water; and

(iii) The requirements of paragraph (c)(2) of this section are met.

(2) For every hole meeting the requirements of paragraph (c)(1) of this section, an internal drainage system of durable non-degradable rock shall be installed from the auger hole through the backfill and exit into a stable channel approved by the regulatory authority to allow dissipation of water pressure and to prevent saturation of the backfill.

(d) The regulatory authority shall prohibit auger mining in the permit area if it determines that—

(1) Sealing auger holes will not eliminate water pollution or instability of fills;

(2) The prohibition is necessary to maximize the utilization and conservation of the solid fule resources; or

(3) Subsidence resulting from auger mining may disturb or damage powerlines, pipelines, buildings, or other facilities.

(e) In addition to meeting the requirements of this Part, each person who conducts auger mining activities shall meet each requirement of Part 816 including, but not limited to, the requirement to return the disturbed

areas to approximate original contour and to maintain the hydrologic balance and water quality.

PART 820—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—ANTHRACITE MINES IN PENNSYLVANIA

Sec.
820.1 Scope.
820.2 Objective.
820.11 Performance standards: Anthracite mines in Pennsylvania.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 529, Pub. L. 95-97, 91 Stat. 448, 449, 467, 470, 471, 514 30 (U.S.C. 1202, 1211, 1251, 1253, 1254, 1279).

§ 820.1 Scope.

This Part contains performance standards for surface coal mining and reclamation operations conducted at anthracite coal mines located in Pennsylvania.

§ 820.2 Objective.

This Part implements Subsection 529(a) of the Act, which requires the Secretary to adopt special performance standards for anthracite mines regulated by environmental protection standards of a State.

§ 820.11 Performance standards: Anthracite mines in Pennsylvania.

(a) Anthracite surface coal mining and reclamation operations in Pennsylvania shall comply with all the Pennsylvania environmental protection provisions for anthracite coal mining in effect on August 3, 1977, instead of the provisions of this Subchapter. These Pennsylvania provisions include, but are not limited, to—

(1) The Pennsylvania Anthracite Strip Mining and Conservation Act, June 27, 1947, P.L. 1095, as amended through August 3, 1977, 52 P.S. Section 681.1 *et seq* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(2) The Pennsylvania Coal Refuse Disposal Control Act, September 24, 1968, P.L. 1040, No. 318, as amended through August 3, 1977, 52 P.S. Section 30.51 *et seq.* (Purdons 1966, 1978 Supp.)

(3) The Pennsylvania Surface Mining Conservation and Reclamation Act, May 31, 1945, P.L. 1198, as amended through August 3, 1977, 52 P.S. 1396.1 *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(4) The Pennsylvania Anthracite Coal Mine Act of 1965, P.L. No 346, as amended through August 3, 1977, 52 P.S. Section 70.101 *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(5) The Pennsylvania Clean Streams Law, as amended through August 3, 1977, 35 P.S. Sections 691.1 *et. seq.* and regulations adopted thereunder;

(6) The Pennsylvania Gas Operations, Well-Drilling, Petroleum and Coal Mining Act, P.L. 756, Nov. 30, 1965, as amended through August 3, 1977, 52 P.S. Section 2101 *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(7) Provisions regulating the discharge of coal, culm or refuse into streams under P.L. 640, June 27, 1913, as amended through August 3, 1978 52 P.S. Section 631 *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(8) Regulation of coal stripping under P.L. 133, June 18, 1941, as amended through August 3, 1978, 52 P.S. Section 1471 *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(9) Regulation of subsidence under P.L. 1198, May 22, 1921, as amended through August 3, 1977, 52 P.S. Section 661 *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(10) Regulation of subsidence under Pub. L. 1538, Sept. 20, 1961, as amended through August 3, 1977 (52 P.S. Section *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder;

(11) The establishment of mine safety zones under P.L. 1994, Dec. 22, 1959, as amended through August 3, 1978, 52 P.S. Section 3101 *et seq.* (Purdons 1966, 1978 Supp.) and regulations adopted thereunder; and

(12) All Pennsylvania statutes and regulations relating to the prevention or control of air pollution in effect on August 3, 1978.

(b) If Pennsylvania's regulatory program or regulations for anthracite coal mining and reclamation operations in effect on August 3, 1977, are amended, the Secretary, upon receipt of a notice of amendment, shall issue additional regulations as necessary to meet the purposes of this Act.

(c) Anthracite coal mines in Pennsylvania shall comply with all the requirements of this Chapter except—

(1) The performance standards in Subchapter K; and

(2) Where specifically exempted within the regulations.

PART 821—VARIANCES FROM PERMANENT PROGRAM PERFORMANCE STANDARDS—CERTAIN MINES IN ALASKA

Sec.
821.1 Scope.
821.2 Objective.
821.11 Alaska: Operations eligible for a variance.
821.12 Alaska: Expiration of variance.
821.13 Alaska: Procedure for obtaining variance.
821.14 Alaska: Scope of variance.

AUTHORITY: Sections 102, 201, 501, 503, 504, 512, 515, 516, 701, 708, 716 Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 471, 482, 486, 495, 516, 521, 526 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1562, 1265, 1266, 1291, 1298, 1306).

§ 821.1 Scope.

This Part sets forth the variances from the performance standards of Subchapter K for certain mines in Alaska.

§ 821.2 Objective.

This Part is intended to ensure that during the time period set forth in 30 CFR 821.12, enforcement of the performance standards of this Subchapter need not cause cessation of the operation of Alaska mines which were in operation during the year prior to August 3, 1977.

§ 821.11 Alaska: Operations eligible for a variance.

Variances from the performance standards of this Subchapter may be granted to a person who conducts surface coal mining and reclamations operations—

(a) Which are located in Alaska;

(b) From which coal was mined between August 3, 1976, and August 2, 1977; and

(c) For which the Secretary determines that the variance is necessary to ensure continued operation.

§ 821.12 Alaska: Expiration of variance.

Each variance granted under this Part shall expire on the earlier of the following:

(a) One year after the Secretary makes the report on the findings of the Alaska Coal Mine Study to the President and Congress as required under Section 708 of the Act; or

(b) August 3, 1980.

§ 821.13 Alaska: Procedure for obtaining variance.

(a) Any person who conducts a surface coal mining and reclamation operation in Alaska may petition the Secretary to modify the applicability of a performance standard to that operation. The petition shall be in writing and shall clearly identify—

(1) The performance standard involved;

(2) The alternative methods to be used to protect the environment and the public health and safety;

(3) The reasons for the request for modification, with full descriptions of—

(i) The effect that continued compliance with the performance standard would have on mining and reclamation; and

(ii) The effect that the proposed modification would have on the envi-

ronment and the public health and safety.

(4) The location of the mine;

(b) If the Secretary determines that the petition presents reasonable justification for modifying the performance standard, he shall publish a notice of intent to modify the applicability of the performance standard and to hold a hearing in accordance with paragraph (c) of this Section. The notice shall be published in the FEDERAL REGISTER and in a newspaper of general circulation in the area of Alaska where the coal mine is located.

(c) The Secretary shall hold a public hearing on the petition in Alaska and any person may testify for or against the proposed modification.

(d) The Secretary shall publish his decision in the FEDERAL REGISTER and in the same newspaper in which the original notice was published, after the Secretary—

(1) Considers public comment;

(2) Obtains the concurrence of the Administrator of the United States Environmental Protection Agency; and

(3) Consults with the Governor of Alaska.

§ 821.14 Alaska: Scope of variance.

No variance shall waive the applicability of the performance standards of this Subchapter more than is necessary to insure continuation of the mining operation. Except as specifically modified by a variance granted under this Part, each performance standard of this Subchapter shall apply to each surface coal mining and reclamation operation in Alaska.

PART 822—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—OPERATIONS IN ALLUVIAL VALLEY FLOORS

Sec.
822.1 Scope.
822.2 Objectives.
822.11 Alluvial valley floors: Hydrologic functions.
822.12 Alluvial valley floors: Farming and water quality.
822.13 Alluvial valley floors: Maintenance of agricultural uses.
822.14 Alluvial valley floors: Monitoring.

AUTHORITY: Sections 162, 201, 501, 503, 504, 506, 508, 510, 515, 516, 517 and 701 Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 471, 473, 478, 480, 486, 495, 498, 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1256, 1258, 1260, 1265, 1266, 1267, 1291).

§ 822.1 Scope.

This Part governs surface coal mining and reclamation operations on or which affect alluvial valley floors in the arid and semi-arid areas located west of the 100th meridian west longitude.

§ 822.2 Objectives.

This Part establishes the minimum performance and reclamation standards to preserve either the existing or potential agricultural uses and productivity of alluvial valley floors during and after mining.

§ 822.11 Alluvial valley floors: Hydrologic functions.

(a) Each person who conducts, surface coal mining and reclamation operations in or adjacent to alluvial valley floors shall plan and conduct the operations to preserve the essential hydrologic functions of the alluvial valley floors throughout the mining and reclamation process.

(b) During mining, the essential hydrologic functions of alluvial valley floors shall be preserved along reaches of alluvial valley floors not disturbed. These functions shall be preserved by maintaining those geologic, hydrologic, and biologic characteristics of the alluvial valley floor that support the functions.

(c) After mining, the essential hydrologic functions of alluvial valley floors shall be preserved in affected and adjacent areas of alluvial valley floors by reestablishing those geologic, hydrologic, and biologic characteristics of the alluvial valley floor that are necessary to support these functions.

(d) The characteristics that support the essential hydrologic functions of alluvial valley floors are those in 30 CFR 785.19 and those other geologic, hydrologic, or biologic characteristics identified during pre-mining investigations or monitoring conducted during the surface coal mining and reclamation operation.

§ 822.12 Alluvial valley floors: Farming and water quality.

(a) Surface coal mining and reclamation operations shall not interrupt, discontinue, or preclude farming on alluvial valley floors, unless—

(1) The pre-mining land use is undeveloped rangeland which is not significant to farming; or

(2) The area of affected alluvial valley floor is small and provides or may provide negligible support for production from one or more farms.

(b) If environmental monitoring shows that a surface coal mining operation is interrupting, discontinuing, or precluding farming on alluvial valley floors, the operation shall cease until remedial measures are taken by the person who conducts the operation. The remedial measures shall be approved by the regulatory authority.

(c) Each person who conducts surface coal mining and reclamation operations shall plan and conduct the operations so that no material damage is caused to the quality or quantity of water in surface or underground water systems that supply alluvial valley floors. If environmental monitoring shows that the surface coal mining operation is causing material damage to water that supplies alluvial valley floors, the operation shall cease until remedial measures are taken by the person who conducts the operation. The remedial measures shall be approved by the regulatory authority.

(d) This section does not apply to a surface coal mining operation under an initial permit issued under a State or Federal program which satisfies paragraph (e) of this Section, or to those portions of a surface coal mining operation under a renewal permit under a State or Federal program which were previously identified in a reclamation plan under the State or Federal program and which satisfy paragraph (e) of this Section.

(e) This section shall not apply to an operation that:

(1) Was in production in the year preceding August 3, 1977, was located in or adjacent to an alluvial valley floor, and produced coal in commercial quantities during the year preceding August 3, 1977; or

(2) Had obtained specific permit approval by the State regulatory authority before August 3, 1977, to conduct surface coal mining operations for an area within an alluvial valley floor.

§ 822.13 Alluvial valley floors: Maintenance of agricultural uses.

The person who conducts surface coal mining and reclamation operations shall ensure that the agricultural utility and the level of productivity of alluvial valley floors is reestablished and maintained after mining.

§ 822.14 Alluvial valley floors: Monitoring.

(a) The person who conducts surface coal mining and reclamation operations shall install, maintain, and operate an environmental monitoring system on all alluvial valley floors affected by the operations in order to show that the agricultural utility and production and the potential for agricultural utility and production are being maintained.

(b) The monitoring system shall result in sufficient numbers of hydrologic and biologic measurements to demonstrate that the important characteristics have been identified so that the essential hydrologic functions may be reestablished.

(c) The monitoring shall include ground water and surface water quantity and quality, vegetation measurements, and soil analyses.

(d) The monitoring shall be performed at a frequency which is adequate to indicate longer term trends that could affect agricultural use of the alluvial valley floors.

(e) Monitoring shall be performed during operations to identify characteristics of the alluvial valley floor not identified in the permit application and to evaluate the importance of all characteristics.

(f) All monitoring data collected shall routinely be made available to the regulatory authority.

PART 823—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—OPERATIONS ON PRIME FARMLAND

Sec.
823.1 Scope.
823.2 Objective.
823.11 Prime farmland: Special requirements.
823.12 Prime farmland: Soil removal.
823.13 Prime farmland: Soil stockpiling.
823.14 Prime farmland: Soil replacement.

AUTHORITY: Sections 102, 201, 501, 503, 504, 506, 508, 510, 515, 516, 517, 701 Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 471, 473, 478, 480, 486, 495, 498, 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1256, 1258, 1260, 1266, 1267, 1291).

§ 823.1 Scope.

This Part sets forth special performance standards for surface coal mining and reclamation operations on prime farmland.

§ 823.2 Objective.

The objective of this Part is to minimize the effects of mining upon prime farmland so that the land will have equal productivity after mining and is not lost as a resource.

§ 823.11 Prime farmland: Special requirements.

Each person who conducts surface coal mining and reclamation operations on prime farmland shall meet the following requirements:

(a) A permit shall be obtained under 30 CFR 785.17.

(b) Each soil horizon to be used in the reconstruction of the soil shall be removed before drilling, blasting, or mining in a manner that prevents mixing or contaminating the soil horizon with undesirable material. Where removal of soil horizons results in erosion that may cause air and water pollution, the regulatory authority shall specify methods of treatment to control erosion of exposed overburden.

§ 823.12 Prime farmland: Soil removal.

(a) Each person who conducts surface coal mining and reclamation operations on prime farmland shall—

(1) Separately remove the entire A horizon or other suitable soil materials which will create a final soil having an equal or greater productive capacity than that which existed prior to mining.

(2) Separately remove the B horizon of the soil or a combination of B horizon and underlying C horizon or other suitable soil material that will create a reconstructed root zone of equal or greater productive capacity than that which existed before mining.

(3) Separately remove the underlying C horizons or other strata, or a combination of horizons or other strata, to be used instead of the B horizon. These combinations shall be of equal or greater thickness and equal to or more favorable for plant growth than the B horizon. When replaced these combinations shall create in the reconstructed soil a final root zone of comparable depth and quality to that which existed in the natural soil.

(b) The minimum depth of soil and soil material to be reconstructed shall be 48 inches unless the regulatory authority specifies a greater depth because of uniquely favorable soil horizons at greater depths.

§ 823.13 Prime farmland: Soil stockpiling.

If stockpiling of soil horizons is allowed by the regulatory authority instead of immediate replacement, the A horizon and B horizon shall be stored separately. These stockpiles shall be placed within the permit area where they are not disturbed or exposed to excessive water or wind erosion before the stockpiled horizons can be redistributed. Stockpiles in place for more than 30 days shall meet the requirements of Section 816.23.

§ 823.14 Prime farmland: Soil replacement.

Each person who conducts surface coal mining and reclamation operations on prime farmland shall meet the following requirements when replacing soil:

(a) Replace the soil material on land graded to the final contour;

(b) Scarify the final graded land before the soil material is replaced;

(c) Replace the B horizon or other suitable soil material specified in Sections 823.12(a)(2) and (a)(3), in a manner that avoids excessive compaction of overburden and to a thickness comparable to the root zone that existed in the soil before mining.

(d) Replace the A horizon or other suitable soil materials, specified in Section 823.12(a)(1) as the final surface soil layer. This surface soil layer shall equal the thickness of the original soil as determined in 30 CFR 785.17(e)(1) and be replaced in a manner that—

(1) Prevents excessive compaction of both the surface layer and underlying material and reduction of permeability to less than 0.06 inch per hour in the upper 20 inches of the reconstructed soil profile; and

(2) Protects the surface layer from wind and water erosion before it is seeded or planted.

(e) Apply nutrients and soil amendments as needed to establish quick vegetative growth.

PART 824—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—MOUNTAINTOP REMOVAL

Sec.
824.1 Scope.
824.2 Objectives.
824.11 Mountaintop removal: Performance standards.

AUTHORITY: Sections 102, 201, 501, 503, 504, 506, 508, 510, 515, 517, 701 Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 471, 474, 478, 480, 486, 498, 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1354, 1256, 1258, 1260, 1265, 1267, 1291).

§ 824.1 Scope

This Part sets forth an alternate method of surface mining that grants an exception to the approximate original contour performance standard requirement.

§ 824.2 Objectives.

The objectives of this Part are to—

(a) Enhance coal recovery;

(b) Reclaim the land to equal or higher economic post-mining use; and

(c) Protect and enhance environmental and other values under the Act.

§ 824.11 Mountaintop removal: Performance standards.

(a) Under an approved State program or under a Federal program, surface coal mining and reclamation operations may be granted a variance from the requirements of this Subchapter for restoring affected areas to approximate original contour, if—

(1) The regulatory authority grants an exemption from the requirement to restore to approximate original contour in accordance with 30 CFR 785.15;

(2) The entire coal seam running through the upper fraction of a mountain, ridge, or hill is removed by removing all of the overburden and creating a level plateau or gently rolling contour with no highwalls remaining;

(3) An industrial, commercial, agricultural, residential, or public facility (including recreational facilities) use is proposed and approved for the affected land;

(4) The alternative land use criteria of Section 816.33 are met; and

(5) All applicable performance standards other than the requirement to restore to approximate original contour are met.

(b) Surface coal mining and reclamation operations conducted under this variance shall comply with the following standards:

(1) An outcrop barrier of sufficient width, consisting of the toe of the lowest coal seam, and its associated overburden, shall be retained to prevent slides and erosion.

(2) The final graded top plateau slopes on the mined area shall be less than $1v:5h$ so as to create a level plateau or gently rolling configuration and the outslopes of the plateau shall not exceed $1v:2h$, except where engineering data substantiates and the regulatory authority finds that a minimum static safety factor of 1.5 will be attained.

(3) The resulting level or gently rolling contour shall be graded to drain inward from the outslope except at specific points where it drains over the outslope in stable protected channels.

(4) Natural watercourses shall not be damaged.

(5) All waste and acid-forming or toxic-forming materials, including the strata immediately below the coal seam shall be covered with non-toxic spoil to prevent pollution and achieve the post-mining land use.

(6) Spoil shall be placed on the mountaintop bench as is necessary to achieve the post-mining land use approved under paragraphs (a)(3) and (a)(4) of this Section. All excess spoil material not retained on the mountaintop shall be placed in accordance with the standards of 30 CFR 816.71-816.73 and 816.52.

(c)(1) Each permit which grants approval for mountaintop removal shall be reviewed not more than 3 years from the date the permit was issued, unless the person who conducts the operation affirmatively demonstrates and the regulatory authority finds that all operations are proceeding in accordance with the terms of the permit and applicable requirements of the Act and this Part.

(2) Each permit which grants approval for mountaintop removal may be modified by the regulatory authority if it determines that more stringent measures are necessary to:

(i) Prevent or control slides or erosion;

(ii) Prevent damage to natural water courses;

(iii) Avoid water pollution; or

(iv) Ensure successful revegetation.

PART 825—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—SPECIAL BITUMINOUS COAL MINES IN WYOMING

Sec.

825.1 Scope.
825.2 Objective.
825.11 Performance standards: Special bituminous coal mines operating prior to January 1, 1972.
825.12 Performance standards: Special bituminous coal mines developed after August 3, 1977.
825.13 Changes in Wyoming program.

AUTHORITY: Sections 102, 201, 501, 503, 504, 508, 510, 515, 527, 701 Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 471, 478, 480, 486, 513, 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1258, 1260, 1277, 1291).

§ 825.1 Scope.

(a) This Part sets forth special requirements for certain bituminous coal surface mines located west of the 100th meridian west longitude, which existed on January 1, 1972, or are immediately adjacent thereto and for which development began after August 3, 1977, in accordance with Section 527 of the Act.

(b) Unless specifically modified by this Part, each performance standard of this Subchapter applies to these mines.

§ 825.2 Objective.

The objective of this Part is to minimize any adverse environmental effect of special bituminous coal mines located west of the 100th meridian west longitude by providing—

(a) Special standards for on-site handling of spoil;

(b) Elimination of depressions capable of collecting water;

(c) Creation of improvements and regrading to approximate original contour; and

(d) Allowing for retention of certain stable highwalls.

§ 825.11 Performance standards: Special bituminous coal mines operating before January 1, 1972.

(a) This Section contains special performance standards for those portions of special bituminous coal mines, as defined in 30 CFR 701.5, which—

(1) Were approved for operation before January 1, 1972, including the orderly expansion of such a mine pit to the extent authorized by State law;

(2) Have actually been producing coal since January 1, 1972;

(3) Because of past duration of mining are committed to a mode of operation that warrants an exception to some of the provisions of this Subchapter; and

(4) Involve the mining of more than one seam and mining has been initiated on the deepest coal seam contemplated to be mined in the current operation.

(b) Operations subject to this Section shall at a minimum meet the general performance standards of this Subchapter for all operations conducted on the permit area outside the mine pit and for those operations associated with spoil storage areas. All the standards of this Subchapter apply to the mine pit for requirements for backfilling and grading. Special requirements for backfilling and grading the mine pit area are as follows:

(1) In the final mine area, highwalls shall be allowed to remain if found to be stable by the regulatory authority;

(2) Benches may be constructed if approved by the regulatory authority in the approved mining plan;

(3) The exposed pit floors shall be sloped and graded to provide access to the area;

(4) Topsoil shall be replaced in accordance with 30 CFR 816.24;

(5) The floor of the pit shall be seeded according to the requirements of 30 CFR 816.111-816.117 and 816.102;

(6) Where water impoundments are included as part of the mine plan, riprap may be used if necessary to prevent erosion; and

(7) Spoil piles shall be graded and contoured with no more than the overall slope of 17 degrees allowed, and terraces may be used to break the slope when it can be shown that terraces will accomplish the required reclamation. For the post-mining land use, steeper slopes may be permitted upon approval of the regulatory authority, if it can be demonstrated that this method provides the required results.

§ 825.12 Performance standards: Special bituminous coal mines developed after August 3, 1977.

(a) This Section applies to those special bituminous coal mines, as defined in 30 CFR 701.5, which are developed after August 3, 1977, on lands immediately adjacent to portions of mines subject to Section 825.11.

(b) Operations subject to this section shall comply with all requirements of Wyoming law.

(c) Operations subject to this section shall, at a minimum, meet the general performance standards of this Subchapter for all operations conducted on the permit area outside the mine pit and for the operations associated with spoil storage areas. The standards of 30 CFR Part 816 apply to the mine pit except for the requirements for backfilling and grading.

(d) Special requirements for backfilling and grading the mine pit area are as follows:

(1) *Slope specifications.* Slope specifications for the post-mining land use shall be based on an average of the natural slopes measured in the immediate area of the mine-site. The maximum inclination of the slopes in the reclaimed area shall not be greater than this average slope.

(i) Slopes steeper than the average of the natural slopes may be approved by the regulatory authority if it can be demonstrated that returning the affected area to a slope equal to or less than the average natural slope would greatly increase the amount of disturbed land.

(ii) Measurements of individual slopes, locations at which measurements are made, and the average natural slope as determined from the individual slope measurements shall be submitted for approval to the regulatory authority.

(2) *Post-mining land uses that do not include permanent water impoundments.*

(i) The final mine area shall be backfilled, graded, and contoured to the extent necessary to return the land to the use approved by the regulatory authority.

(ii) All backfilling, grading, and contouring shall preserve the original drainage system or provide substitute drainage systems approved by the regulatory authority.

(iii) Terraces or benches may be used only if it can be demonstrated that contouring methods do not provide the required results. Detailed plans of dimensions and design of the terraces or benches, check dams, erosion prevention techniques, and slopes of the terraces or benches and their intervals shall be submitted to the regulatory authority for approval before construction.

(iv) Depressions that will accumulate water shall not be allowed unless they are approved under paragraph (d)(3) of this Section.

(3) *Post-mining land uses that include permanent water impoundments.*

(i) The exposed mine pit area shall be sloped, graded, and contoured to blend with the topography of the surrounding terrain and to provide access to the area. Where necessary to prevent erosion, riprap shall be used.

(ii) If the person who conducts the surface mining activities demonstrates that the pitwall can be stabilized by terracing or other techniques, the regulatory authority may approve leaving the stabilized pitwall along one-half of the proposed shoreline, as measured along the circumference. The remaining part of the shoreline shall be graded and contoured to blend with the topography of the surrounding terrain and to provide access to the area. Detailed explanations of the techniques to be used to stabilize the pitwall shall be submitted for approval to the regulatory authority.

§ 825.13 Changes in Wyoming program.

In the event of an amendment or revision to the State of Wyoming's regulatory program, regulations, or decisions made thereunder governing special bituminous coal mines, the Secretary shall issue additional regulations as necessary to meet the purposes of the Act.

PART 826—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—OPERATIONS ON STEEP SLOPES

Sec.
826.1 Scope.
826.2 Objective.
826.11 Applicability.
826.12 Steep slopes: Performance standards.
826.13 Steep slopes: Limited variances.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 508, 510, 515, 701 Pub. L. 95-87, 91 Stat. 448, 449, 467, 470, 478, 480, 486, 467, 470, 478, 480, 486, 516 (U.S.C. 1202, 1211, 1251, 1253, 1258, 1260, 1265, 1291).

§ 826.1 Scope.

This Part provides special environmental performance standards for operations on steep slopes.

§ 826.2 Objective.

The objective of this Part is to ensure adequate environmental protection during surface coal mining and reclamation operations on steep slopes.

§ 826.11 Applicability.

(a) Any surface coal mining and reclamation operations on steep slopes shall meet the performance standards of this Part.

(b) The standards of this Part do not apply to:

(1) Mining conducted on a flat or gently rolling terrain with an occasional steep slope through which the mining proceeds and leaves a plain or predominatly flat area; or

(2) That part of operations granted a variance under Section 515(e) of the Act and Section 826.13.

§ 826.12 Steep slopes: Performance standards.

(a) Spoil, waste materials, or debris, including that from clearing and grubbing or haul road construction, and abandoned or disabled equipment, shall not be placed or allowed to remain on the downslope.

(b) The highwall shall be completely covered with compacted spoil and the disturbed area graded to comply with the provisions of 30 CFR 816.101-816.106 including, but not limited to, the return of the site to approximate original contour. The person who conducts the surface coal mining and reclamation operation must demonstrate to the regulatory authority, using standard geotechnical analysis, that the minimum static factor of safety for the stability of all portions of the reclaimed land is at least 1.3.

(c) Land above the highwall shall not be disturbed unless the regulatory authority finds that the disturbance facilitates compliance with the requirements of this Part such as for construction of diversions.

(d) Material in excess of that required by the grading provisions of this Part shall be disposed of in accordance with the requirements of 30 CFR Sections 816.71-816.73.

(e) Woody materials shall not be buried in the backfilled area. Woody materials may be chipped and distributed over the surface of the backfill as mulch if special provision is made for their use and when approved by the regulatory authority.

(f) Unlined or unprotected drainage channels shall not be constructed on backfills constructed under this Part unless approved by the regulatory authority as stable and not subject to erosion.

§ 826.13 Steep slopes: Limited variances.

(a) *Conditions for approval.* Under every Federal program or any approved State program which includes appropriate procedures, persons may be granted variances from the approximate original contour requirements of Section 826.12(b) if the following standards are met:

(1) The highwall shall be completely backfilled with spoil material, which has a static factor of safety of at least 1.3 using standard geotechnical analyses.

(2) The watershed control of the area within which the mining occurs shall be improved by reducing the peak flow from a precipitation or thaw and reducing the total suspended solids or other pollutants in the surface water discharge during a precipitation or thaw. The total volume of flow during every season of the year shall not vary in a way that adversely affects the ecology of any surface water or any existing or planned public or private use of surface or ground water.

(3) Land above the highwall may be disturbed for a horizontal distance which is not greater than one-half the highwall height if the regulatory authority finds that the disturbance is necessary to—

(i) Blend the solid highwall and the backfilled material;

(ii) Control surface runoff; or

(iii) Provide access to the area above the highwall.

(4) The landowner shall have requested in writing, as part of the permit application, that the variance be granted.

(5) The regulatory authority shall make a finding that the approved post-mining land use constitutes an equal or better economic or public use. The post-mining land use shall consist only of one of the following land uses:

(i) Industrial.

(ii) Commercial.

(iii) Residential.

(iv) Public use, including recreational facilities.

(6) The backfilling, grading, and placement of spoil shall be designed and certified by a qualified registered professional engineer in conformance with professional standards established to ensure the stability, drainage, and surface configuration necessary for the intended use of the site.

(7) Only the amount of spoil as is necessary to achieve the post-mining land use, ensure the stability of spoil retained on the bench, and meet all other requirements of the Act and this Chapter shall be placed off the mine bench. All spoil not retained on the bench shall be placed in accordance with Section 816.71–816.73 and Section 816.101–102.

(b) *Review of variances.* (1) Within the six months before the third anniversary of the issuance of the permit, the person who conducts the surface coal mining and reclamation operation shall demonstrate to the regulatory authority that the proposed development is proceeding in accordance with the terms of the reclamation plan.

(2) If the person who conducts the surface coal mining and reclamation operation fails to comply with paragraph (b)(1) of this Section, the regulatory authority shall, not later than 3 years after the date of issuance of the permit, review the variance to determine whether it should be revoked, revised, or renewed.

PART 827—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—COAL PROCESSING PLANTS AND SUPPORT FACILITIES NOT LOCATED AT OR NEAR THE MINESITE OR NOT WITHIN THE PERMIT AREA FOR A MINE

Sec.
827.1 Scope.
827.11 Applicability.
827.12 Coal processing plants: Performance standards.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 508, 510, 515, 517, 701 Pub. L. 95–87, 91 Stat. 448, 449, 467, 479, 471, 480, 486, 498, 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1260, 1265, 1267, 1291).

§ 827.1 Scope.

This Part sets forth requirements for coal processing plants and their support facilities not located at or near the mine site or not within the permit area for a mine, to ensure the protection of public property and the environment, in accordance with the Act.

§ 827.11 Applicability.

Each person who conducts surface operations consisting of operation of a coal processing plant or support facility which is not located within the permit area for a specific mine shall obtain a permit to conduct the operation.

§ 827.12 Coal processing plants: Performance standards.

Construction, operation, maintenance, modification, reclamation, and removal activities at coal processing plants and associated facilities not located within the permit area for a specific mine shall comply with the following performance standards:

(a) Signs and markers for the coal processing plant, coal processing waste disposal area, and water treatment facilities shall comply with Section 816.11 of this Part, and with all State, Federal, local, or other ordinances and codes.

(b) Roads, transport, and associated structures shall be constructed, maintained, and reclaimed in accordance with Sections 816.31–816.36.

(c) Any stream or channel realignment shall comply with Section 816.44.

(d) Any disturbed area related to the coal processing plant or associated facilities shall have sediment control structures in compliance with Sections 816.45 and 816.46, and all discharges from these structures shall meet the effluent limitations of Section 816.42 and any other State or Federal law applicable to water quality.

(e) Permanent impoundments associated with coal processing plants shall meet the standards of Section 816.49. Dams constructed of or impounding coal processing waste shall comply with Sections 816.91–816.93.

(f) Use of wells and the preservation of water rights shall comply with Sections 816.53 and 816.54.

(g) Disposal of coal processing waste, solid waste, and any excavated materials shall comply with Sections 816.81–816.88, 816.89, and 816.71–816.73, respectively.

(h) Discharge structures for diversions and sediment control structures shall comply with Section 816.47.

(i) Air pollution control measures associated with fugitive dust emissions shall comply with Section 816.95 and all other applicable State or Federal air pollution control requirements and limitations.

(j) Fish, wildlife and related environmental values shall be protected in accordance with Section 816.97.

(k) Slide areas and other surface stabilization shall comply with Section 816.99.

(l) Each person who operates coal processing plants and associated structures shall comply with Section 816.79, to minimize adverse effects upon or resulting from nearby underground operations.

(m) Reclamation operations shall contain provisions for proper topsoil, revegetation, and abandonment in accordance with Sections 816.111–816.117, 816.121–816.124, and 816.56.

(n) Conveyors, buildings, storage bins or stockpiles, water treatment facilities, water storage facilities, and any structure or system related to the coal processing plant shall comply with 30 CFR 816.

(o) Any coal processing plant or associated structures located on prime farmland shall meet the requirements of 30 CFR 823.

PART 828—SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS—IN-SITU PROCESSING

Sec.
828.1 Scope.
828.2 Objectives.
828.11 In-situ processing: Performance standards.
828.12 In-situ processing: Monitoring.

AUTHORITY: Secs. 102, 201, 501, 503, 504, 510, 515, 517, 701; Pub. L. 95–87, 91 Stat. 448, 449, 467, 470, 471, 480, 486, 498, 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1260, 1265, 1267, 1291).

§ 828.1 Scope.

This Part sets forth special environmental performance standards for in situ processing activities.

§ 828.2 Objectives.

This Part is intended to ensure that all in-situ processing activities are conducted in a manner which preserves and enhances environmental values in accordance with the Act. This Part provides additional performance standards to reflect the nature of in-situ processing.

§ 828.11 In-situ processing: Performance standards.

(a) The person who conducts in-situ processing activities shall comply with 30 CFR Part 817 and this Section.

(b) In situ processing activities shall be planned and conducted to minimize disturbance to the prevailing hydrologic balance by—

(1) Avoiding discharge of fluids into holes or wells other than as approved by the regulatory authority;

(2) Injecting process recovery fluids only into geologic zones or intervals approved as production zones by the regulatory authority;

(3) Avoiding annular injection between the wall of the drill hole and the casing; and

(4) Preventing discharge of process fluid into surface waters.

(c) Each person who conducts in-situ processing activities shall submit for approval, and follow after approval, a plan that ensures that all acid-forming, toxic-forming, or radioactive gases, solids, or liquids constituting a fire, health, safety, or environmental hazard and caused by the mining and recovery process are promptly treated, confined, or disposed of in a manner that prevents contamination of ground and surface waters, damage to

fish, wildlife and related environmental values, and threats to the public health and safety.

(d) Each person who conducts in-situ processing activities shall prevent flow of the process recovery fluid—

(1) Horizontally beyond the affected area identified in the permit; and

(2) Vertically into overlying or underlying aquifers.

(e) Each person who conducts in-situ processing activities shall restore the quality of affected ground water in the mine plan and adjacent area, including ground water above and below the production zone, to the approximate pre-mining levels or better to ensure that the potential for use of the ground water is not diminished.

§ 828.12 In-situ processing: Monitoring.

(a) Each person who conducts in-situ processing activities shall monitor the quality and quantity of surface and ground water and the subsurface flow and storage characteristics, in a manner approved by the regulatory authority to measure changes in the quantity and quality of water in surface and ground water systems in the mine plan area and in adjacent areas.

(b) Air quality monitoring shall be conducted in accordance with the air quality monitoring program approved by the regulatory authority and shall include periodic measurement of windspeed, direction, and temperature and of those air quality indicators specified by the regulatory authority in consultation with the appropriate air quality control authority.

(c) Environmental monitoring shall measure, at a minimum, any increases in ambient levels of phenols, nitrogen compounds, and carbon compounds.

PART 840—STATE REGULATORY AUTHORITY INSPECTION AND ENFORCEMENT

Sec.
840.1 Scope.
840.11 Inspections by State regulatory authority.
840.12 Right of entry.
840.13 Enforcement authority.
840.14 Availability of records.

AUTHORITY: Secs. 102, 201, 501(b), 503, 517, 518, 521, and 523 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 498, 499, 504, 510 (30 U.S.C. 1202, 1211, 1251, 1253, 1267, 1268, 1271, 1273).

§ 840.1 Scope.

This Part sets forth the minimum requirements for inspection and enforcement by a State, where a State is the regulatory authority under a State program or a cooperative agreement.

§ 840.11 Inspections by State regulatory authority.

(a) The State regulatory authority shall conduct, on at least one partial inspection per month of each surface coal mining and reclamation operation under its jurisdiction. A partial inspection is an on-site review of a person's compliance with some of the permit conditions and requirements imposed under the State program or the cooperative agreement during which the inspector collects evidence with respect to every violation of any such condition or requirement he observed.

(b) The State regulatory authority shall conduct at least one complete inspection per calendar quarter of each surface coal mining and reclamation operation under its jurisdiction. A complete inspection is an on-site review of a person's compliance with all permit conditions and requirements imposed under the State program or the cooperative agreement, within the entire area disturbed or affected by surface coal mining and reclamation operations, including the collection of evidence with respect to every violation of any such condition or requirement.

(c) The inspections required under paragraphs (a) and (b) of this section shall:

(1) Be carried out on an irregular basis so as to monitor compliance at all operations, including those which operate nights, weekends, or holidays;

(2) Occur without prior notice to the person being inspected or any agent or employee of such person, except for necessary on-site meetings; and

(3) Include the prompt filing of inspection reports adequate to enforce the requirements of and to carry out the terms and purposes of the applicable program, the regulations and the Act.

§ 840.12 Right of entry.

(a) Within its jurisdiction, the State regulatory authority shall have statutory authority that grants its representatives a right of entry to, upon, and through any surface coal mining and reclamation operation without advance notice or search warrant, upon presentation of appropriate credentials.

(b) The State regulatory authority shall have statutory authority that authorizes its representatives to inspect any monitoring equipment or method of operation and to have access to and copy any records required under the State program or the cooperative program or a permit issued the program. The statutory authority shall provide that the representatives may exercise such rights at reasonable times, without advance notice or a search warrant, upon presentation of appropriate credentials.

§ 840.13 Enforcement authority.

(a) Each State program and each cooperative agreement program shall contain civil and criminal penalties which are no less stringent than those set forth in Section 518 of the Act and in 30 CFR 843.20 and Part 845.

(b) The enforcement provisions of each State program and cooperative agreement program shall contain sanctions no less stringent than those set forth in Section 521 of the Act and in 30 CFR 843.11, 843.12, 843.19, Part 808, and subchapter G.

(c) Each State program and each cooperative program shall contain procedural rights relating to the penalties and sanctions in paragraphs (a) and (b) of this section which shall be consistent with those provided in 30 CFR 843 and 845 and subchapter G.

(d) Nothing in the Act or this Part shall be construed as eliminating any additional enforcement rights or procedures which are available under State law to a State regulatory authority but which are not specifically enumerated in Section 518 and Section 521 of the Act.

§ 840.14 Availability of records.

(a) Each State regulatory authority shall make available to the Director and the Regional Director, upon request, copies of all documents relating to applications for and approvals of existing, new, or revised permits and all documents relating to inspection and enforcement actions.

(b) Copies of all records, reports, inspection materials, or information obtained by the State under a State program or a cooperative program, except information mentioned in paragraphs (c) and (d) of this section shall be immediately made available to the public in the area of mining so that they are conveniently available to residents in the area of mining. Copies shall be deemed conveniently available if they are furnished upon request within 5 days, in the case of a county or multicounty location, or 24 hours, in the case of a State or central location.

(c) Information as to coal seams, test borings, core samplings, or soil samples which is required under a State program or a cooperative program under Section 507(b)(17) of the Act and pertains only to analysis of the chemical and physical properties of the coal, except information regarding mineral or elemental content which is potentially toxic in the environment, shall be kept confidential and shall not be made a matter of public record.

(d) In order to protect preparation for hearings and enforcement proceedings, the Director and the State regulatory authority may enter into agreements regarding procedures for the special handling of investigative and enforcement reports and other materials.

PART 842—FEDERAL INSPECTIONS

Sec.
842.1 Scope.
842.11 Federal inspections.
842.12 Citizens' requests for federal inspections.
842.13 Right of entry.
842.14 Review of inspections.
842.15 Review of decisions not to inspect or enforce.
842.16 Availability of records.

AUTHORITY: Secs. 102, 201, 501(b), 504, 507, 517, 518, 521 and 523 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 471, 474, 499, 504, 510 (30 U.S.C. 1202, 1211, 1251, 1254, 1257, 1267, 1268, 1271, 1273).

§ 842.1 Scope.

This Part sets forth general procedures governing Federal inspections under the permanent regulatory program.

§ 842.11 Federal inspections.

(a) Authorized representatives of the Secretary shall conduct inspections of surface coal mining and reclamation operations as are necessary:

(1) To evaluate the administration of approved State programs and cooperative programs;

(2) To develop or enforce Federal programs and Federal lands programs;

(3) To enforce those requirements and permit conditions imposed under a State program or cooperative program not being enforced by a State, under Section 504(b) or section 521(b) of the Act; and

(4) To determine whether the citations issued during an inspection authorized under this section have been complied with.

(b) An authorized representative of the Secretary shall immediately conduct a Federal inspection to enforce any requirement the Act, this Chapter, any State, Federal, cooperative or Federal lands program or any permit condition imposed under such program:

(1) When the authorized representative has reason to believe, on the basis of information available, other than information resulting from a previous Federal inspection, that such a violation exists and—

(i) There is no State regulatory authority; or

(ii) The authorized representative has notified the State regulatory authority of the possible violation and within 10 days after notification the State regulatory authority has failed to take appropriate action to have the violation corrected and to inform the authorized representative that it has taken such action or has a valid reason for its inaction; or

(iii) The person supplying the information provides adequate proof that an imminent danger to the public health and safety or a significant imminent environmental harm exists and that the State regulatory authority has failed to act.

(c) The Office, when acting as the regulatory authority under a Federal program or a Federal lands program and when enforcing a State program or a cooperative program in whole or in part pursuant to Section 504(b) or section 521(b) of the Act, shall conduct inspections of all surface coal mining and reclamation operations under its jurisdiction. These inspections shall average at least:

(1) One partial inspection per month of each surface coal mining and reclamation operation under its jurisdiction. A partial inspection is an onsite review of a person's compliance with some of the permit conditions and requirements imposed under the applicable program, during which the inspector collects evidence with respect to every violation of any such condition or requirement he observed; and

(2) One complete inspection per calendar quarter. A complete inspection is an onsite review of a person's compliance with all permit conditions and requirements imposed under the applicable program within the entire area disturbed or affected by surface coal mining and reclamation operations, including the collection of evidence with respect to every violation of any such condition or requirement.

(d) The inspections required under paragraph (c) shall—

(1) Be carried out on an irregular basis so as to monitor compliance at all operations, including those which operate nights, weekends, or holidays;

(2) Occur without prior notice to the person being inspected or any of his agents or employees, except for necessary onsite meetings; and

(3) Include the prompt filing of inspection reports adequate to enforce the requirements of and to carry out the terms and purposes of the applicable program, any permit condition imposed under such program, this Chapter and the Act.

§ 842.12 Citizens' requests for Federal inspections.

(a) A citizen may request a Federal inspection under 30 CFR 842.11(b) by furnishing to an authorized representative of the Secretary—

(1) A signed written statement giving the authorized representative reason to believe a violation exists, and a phone number and address where the citizen can be contacted; or

(2) An oral report, followed by a signed written statement, giving that information, phone number and address.

(b) The information provided under paragraph (a) of this section shall be considered as furnishing reason to believe a violation exists if it alleges facts that are credible and would, if true, be sufficient to show a violation of the Act, this chapter, any applicable program or any permit condition imposed under such program.

(c) The identity of any person supplying information to the Office relating to a possible violation or imminent danger or harm shall remain confidential with the Office if requested by such person, unless disclosure is required under the Freedom of Information Act (5 U.S.C. Section 552) or other Federal law;

(d) If a Federal inspection is conducted as a result of information provided to the Office by a citizen as described in paragraph (a) of this section, the person who provided the information shall be notified when the inspection is to occur and be allowed to accompany the authorized representative of the Secretary during the inspection. Such person has a right of entry to, upon and through the surface coal mining and reclamation operations about which he supplied information, but only if he is in the presence of and is under the control, direction and supervision of the authorized representative while on the mine property.

(e) Within 10 days of the Federal inspection, or, if there is no inspection, within 15 days of receipt of the citizen's written statement, the Office shall send the citizen the following:

(1) If an inspection was made, a description of the enforcement action taken, which may consist of copies of the Federal inspection report and all notices of violation and cessation orders issued as a result of the inspection or an explanation of why no enforcement action was taken;

(2) If no Federal inspection was conducted, an explanation of the reason why; and

(3) An explanation of the citizen's right, if any, to informal review of the action or inaction of the Office under 30 CFR 842.14.

(f) The Office shall give copies of all materials in paragraphs (e)(1) and (2) of this Section to the person inspected, except that the name of the citizen shall be removed unless disclosure of the citizen's identity is permitted under paragraph (c) of this section.

§ 842.13 Right of entry.

Each authorized representative of the Secretary conducting a Federal inspection under 30 CFR 842.11:

(a) Shall have a right of entry to, upon, and through any surface coal mining and reclamation operations without advance notice or a search warrant, upon presentation of appropriate credentials; and

(b) May, at reasonable times and without delay, have access to and copy any records, and inspect any monitor-

ing equipment or method of operation required under the Act, this Chapter, the applicable program or any permit condition imposed under such program.

§ 842.14 Review of adequacy and completeness of inspections.

Any person who is or may be adversely affected by a surface coal mining operation may notify the Regional Director in writing of any alleged failure on the part of the Office to make adequate and complete Federal inspections as provided in 30 CFR 842.11(c) and (d). The notification shall include sufficient information to create a reasonable belief that 30 CFR 842.11(c) and (d) are not being complied with and to demonstrate how the person is or may be adversely affected. The Regional Director shall within 15 days of receipt of the notification determine whether 30 CFR 842.11(c) and (d) are being complied with, and if not, shall immediately order a Federal inspection to remedy the noncompliance. The Regional Director shall also furnish the complainant with a written statement of the reasons for his determination and the actions, if any, he has taken.

§ 842.15 Review of decision not to inspect or enforce.

(a) Any person who is or may be adversely affected by a surface coal mining operation may ask the Regional Director to informally review an authorized representative's decision not to inspect or take appropriate enforcement action with respect to any violation alleged by that person in a request for Federal inspection under Section 842.12. The request for review shall be in writing and shall include a statement of how the person is or may be adversely affected and why the decision merits review.

(b) The Regional Director shall conduct the review and inform the person in writing of the results of the review within 30 days of his receipt of the request.

(c) Informal review under this Section shall not affect any right to formal review under Section 525 of the Act or to a citizen's suit under Section 520 of the Act.

§ 842.16 Availability of records.

(a) Copies of all records, reports, inspection materials, or information obtained by the Office under Title V of the Act, this chapter, a Federal program or a Federal lands program, or a State program being enforced by the Office under Sections 504(b) or 521(b) of the Act, except information in paragraph (b) of this section, shall be immediately made available to the public at Regional, district and field offices of the Office, or other locations designated by the Office, in the area of mining so that they are conveniently available to residents in the area of mining. All such copies shall be deemed conveniently available if they are provided upon request within 5 days, in the case of a district, field or other local office, and 24 hours in the case of a Regional or central office.

(b) Information as to coal seams, test borings, core samplings, or soil samples which is required under Section 507(b)(17) of the Act, and pertains only to the analysis of the chemical and physical properties of the coal, except information regarding mineral or element content which is potentially toxic in the environment, shall be kept confidential and shall not be made a matter of public record.

PART 843—FEDERAL ENFORCEMENT

Sec.
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843.5 Definitions.
843.11 Cessation orders.
843.12 Notices of violation.
843.13 Suspension or revocation of permits.
843.14 Notices of violation and cessation orders.
843.15 Informal mine site hearing.
843.16 Formal review of citations.
843.17 Failure to give notice and lack of reasonable relief.
843.18 Inability to comply.
843.19 Injunctive relief.

AUTHORITY: Secs. 102, 201, 501(b), 503, 504, 510, 517, 518, 521, 523, 525 and 701 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 470, 471, 480, 498, 499, 504, 510, 511, and 516 (30 U.S.C. 1202, 1211, 1251, 1253, 1254, 1260, 1267, 1268, 1271, 1273, 1275, and 1291).

§ 843.1 Scope.

This Part sets forth general rules regarding enforcement by the Office of the Act, this Chapter, all Federal programs, the Federal lands program, all State programs being enforced by the Office under Section 504(b) or Section 521(b) of the Act, and all permit conditions imposed under any of these programs. Civil penalties in connection with notices of violation and cessation orders issued under this Part are set forth in 30 CFR 845.

§ 843.5 Definitions.

Authorized representative of the Secretary means a person designated by the Secretary as his authorized representative to act with respect to matters mentioned in this Chapter.

§ 843.11 Cessation orders.

(a)(1) An authorized representative of the Secretary shall immediately order a cessation of surface coal mining and reclamation operations or of the relevant portion, if he finds, on the basis of any Federal inspection, any condition or practice or any violation of the Act, this Chapter, any applicable program, or any permit condition imposed under any such program, which:

(i) Creates an imminent danger to the health or safety of the public; or

(ii) Is causing or can reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources.

(2) If the cessation ordered under paragraph (a)(1) of this section will not completely abate the imminent danger or harm in the most expeditious manner possible, the authorized representative of the Secretary shall impose affirmative obligations on the person to whom it is issued to abate the condition, practice, or violation. The order shall specify the time by which abatement shall be accomplished and may require, among other things, the use of existing or additional personnel and equipment.

(b)(1) An authorized representative of the Secretary shall immediately order a cessation of surface coal mining and reclamation operations, or of the relevant portion, when a notice of violation has been issued under 30 CFR 843.12(a) and the permittee fails to abate the violation within the abatement period fixed or subsequently extended by the authorized representative.

(2) A cessation order issued under this paragraph shall require the person to whom it is issued to take all steps the authorized representative of the Secretary deems necessary to abate the violations covered by the order in the most expeditious manner possible.

(c) A cessation order issued under paragraphs (a) or (b) of this section shall be in writing, shall be signed by the authorized representative who issues it and shall set forth with reasonable specificity: (1) the nature of the violation; (2) the remedial action or affirmative obligation required, if any; (3) the time established for abatement including interim steps, if appropriate; and (4) a reasonable description of the portion of the surface coal mining and reclamation operation to which it applies. The order shall remain in effect until the condition, practice or violation has been abated or until vacated, modified or terminated in writing by an authorized representative of the Secretary.

(d) Reclamation operations and other activities intended to protect public health and safety and the environment shall continue during the period of any order unless otherwise provided in the order.

(e) An authorized representative of the Secretary may modify, terminate or vacate a cessation order for good cause, and may extend the time for abatement if the failure to abate within the time previously set was not

caused by lack of diligence on the part of the person to whom it was issued.

(f) An authorized representative of the Secretary shall terminate a cessation order, by written notice to the person to whom the order was issued, when he determines that all conditions, practices or violations listed in the order have been abated. Termination shall not affect the right of the Assessment Office to assess civil penalties for those violations under 30 CFR 845.

§ 843.12 Notices of violation.

(a)(1) An authorized representative of the Secretary shall issue a notice of violation if, on the basis of a Federal inspection carried out during the enforcement of a Federal program or Federal lands program or during Federal enforcement of a State program under Sections 504(b) or 521(b) of the Act, he finds a violation of the Act, this Chapter, the applicable program, or any permit condition imposed under such program, which does not create an imminent danger or harm for which a cessation order shall be issued under 30 CFR 843.11.

(2) A notice of violation issued under this section shall be in writing, shall be signed by the authorized representative who issues it, and shall set forth with reasonable specificity:

(i) The nature of the violation;

(ii) The remedial action required which may include interim steps;

(iii) A reasonable time for abatement which may include time for accomplishment of interim steps; and

(iv) A reasonable description of the portion of the surface coal mining and reclamation operation to which it applies.

(b) An authorized representative of the Secretary may extend the time set for abatement or for accomplishment of an interim step if the failure to meet the time previously set was not caused by lack of diligence on the part of the person to whom it was issued. The total time for abatement under a notice of violation, including all extensions, shall not exceed 90 days from the date of issuance.

(c) If the person to whom the notice was issued fails to meet any time set for abatement or for accomplishment of an interim step, the authorized representative shall issue a cessation order under 30 CFR 843.11(b).

(d) When, on the basis of a Federal inspection conducted to evaluate an approved State program under 30 CFR 842.11(a)(1) or conducted under 30 CFR 842.11(b)(1) as a result of State inaction, an authorized representative of the Secretary finds a violation for which a notice of violation cannot be issued under this Section, the authorized representative shall give written notice of the violation to the State regulatory authority and the person responsible for the violation, so that appropriate enforcement action can be taken by the State regulatory authority. The State regulatory authority shall, within 10 days of receipt of the notice, give written notice to the authorized representative of the action it has taken and plans to take with respect to the violation.

(e) An authorized representative of the Secretary shall terminate a notice of violation by written notice to the person to whom it was issued, when he determines that all violations listed in the notice of violation have been abated. Termination shall not affect the right of the Assessment Office to assess civil penalties for those violations under 30 CFR Part 845 (civil penalties).

§ 843.13 Suspension or revocation of permits.

(a)(1) Except as provided in paragraph (b) of this section, the Director shall issue an order to a permittee requiring him to show cause why his permit and his right to mine under the Act should not be suspended or revoked, if the Director determines that a pattern of violations of any requirements of the Act, these regulations, or any permit conditions by the permittee exists or has existed, and that the violations were willful or were caused by the permittee's unwarranted failure to comply with such requirements or conditions. A willful violation is a violation resulting from an intentional act or omission. Unwarranted failure to comply means the failure of the permittee to prevent the occurrence of any violation due to indifference, lack of diligence, or lack of reasonable care.

(2) The Director may determine that a pattern of violations exists or has existed, based on two or more Federal inspections of the permit area within any 12-month period, after considering the circumstances, including:

(i) The number of violations, on more than one occasion, of one or more provisions of the Act, this Chapter, the applicable program or the permit, which relate to the same general topic;

(ii) The number of violations, on more than one occasion, of one or more provisions of the Act, this Chapter, the applicable program or the permit, which are not related to the same general topic; and

(iii) The extent to which the violations were isolated departures from lawful conduct.

(3) The Director shall determine that a pattern of violations exists if he finds that there were violations of provisions of the Act, this Chapter, the applicable program or the permit relating to the same general topic during three or more Federal inspections of the permit area within any 12-month period.

(b) The Director shall not issue a show cause order if he finds that to do so would not further enforcement of the Act.

(c) At the same time as the issuance of the order, the Director shall:

(1) File a copy of the order to show cause with the Office of Hearings and Appeals and the State regulatory authority, if any;

(2) If practicable, publish notice of the order, including a brief statement of the procedure for intervention in the proceeding, in a newspaper of general circulation in the area of the mine; and

(3) Post the notice at the regional, district or field office closest to the mine site.

(d) If the permittee files an answer to the show cause order and requests a hearing under 43 CFR Part 4, a public hearing shall be provided as set forth in that Part. The Office of Hearings and Appeals shall give thirty days' written notice of the date, time and place of the hearing to the Director, the permittee, the State regulatory authority, if any, and any intervenor. Upon receipt of the notice the Director shall publish it, if practicable, in a newspaper of general circulation in the area of the mine, and shall post it at the Regional, district or field office closest to the mine site.

(e) Within sixty days after the hearing, and within the time limits set forth in 43 CFR Part 4, the Office of Hearings and Appeals shall issue a written determination as to whether a pattern of violations exists and, if appropriate, an order. If the Office of Hearings and Appeals revokes or suspends the permit and the permittee's right to mine under the Act, the permittee shall immediately cease surface coal mining operations on the permit area and shall:

(1) If the permit and the right to mine under the Act are revoked, complete reclamation within the time specified in the order; or

(2) If the permit and the right to mine under the Act are suspended, complete all affirmative obligations to abate all conditions, practices or violations, as specified in the order.

(f) An order issued under this Section by the Office of Hearings and Appeals or by a court, upon review of that order, may assess against either party, at the request of any person, a sum equal to the aggregate amount of all costs and expenses including attorneys' fees, reasonably incurred by that person for or in connection with his participation in proceedings under this section including any judicial review thereof, as the Office of Hearings and Appeals or the court deems proper.

§ 843.14 Notices of violation and cessation orders.

(a) A notice of violation or cessation shall be served on the person to whom it is directed or his designated agent promptly after issuance, as follows:

(1) By tendering a copy at the mine site to the designated agent or to the individual who, based upon reasonable inquiry by the authorized representative, appears to be in charge of the surface coal mining or reclamation operation referred to in the notice or order. If no such individual can be located at the mine site, a copy may be tendered to any individual at the mine site who appears to be an employee of the person to whom the notice or order is issued. Service shall be complete upon tender of the notice or order.

(2) As an alternative to paragraph (a)(1) of this section, service may be made by sending a copy of the notice or order by certified mail or by hand to the person to whom it is issued or his designated agent. Service shall be complete upon tender of the mail and shall not be incomplete because of refusal to accept.

(b) A show cause order may be served on the person to whom it is issued in either manner provided in paragraph (a)(2) of this section.

(c) Designation by any person of an agent for service of notices and orders shall be made in writing to the appropriate regional, district or field office of the Office.

(d) The Office shall furnish copies of notices and orders to the State regulatory authority, if any, promptly after their issuance. The Office may furnish copies to any person having an interest in the surface coal mining and reclamation operation or the permit area, such as the owner of the fee, a corporate officer of the permittee or the bonding company.

§ 843.15 Informal mine site hearing.

(a) Except as provided in paragraphs (b) and (c), a notice of violation or cessation order which requires cessation of mining, expressly or by necessary implication, shall expire within 30 days after it is served unless an informal public hearing has been held within that time at or reasonably close to the mine site so that it may be viewed during the hearing. For purposes of this section, mining means extracting coal from the earth or coal waste piles and transporting it within or from the permit area.

(b) Paragraph (a) of this section shall not apply if the condition, practice or violation in question has been abated or if the mine site hearing has been waived.

(c) The mine site hearing shall be deemed waived if the person to whom the notice or order is issued:

(1) Is informed in the notice or order that he will be deemed to have waived a mine site hearing unless he requests one in writing within 30 days after he has actual notice of the notice or order; and

(2) Fails to request a mine site hearing within that time.

(d) The person to whom the notice or order is issued shall be deemed to have consented to an extension of time for the mine site hearing if his request is received on or after the 21st day after he has actual notice of the notice or order. The extension of time shall equal to the number of days elapsed after the 21st day.

(e) The Office shall give notice of the time, place and subject matter of the mine site hearing, at least five days in advance of the hearing to:

(1) The person to whom the notice or order was issued,

(2) Any person who filed a report which led to that notice or order; and

(3) The State regulatory authority, if any.

(f) The Office shall also, at least five days before the hearing, post notice of the hearing at the regional, district or field office closest to the mine site, and publish it, to the extent practicable, in a newspaper of general circulation in the area of the mine.

(g) Section 554 of Title 5 of the United States Code, regarding requirements for formal adjudicatory hearings, shall not govern mine site hearings. A mine site hearing shall be conducted by a representative of the Office, who may accept oral or written arguments and any other relevant information from any person attending.

(h) Within five days of the close of the mine site hearing, the Office shall affirm, modify, or vacate the notice or order in writing. The decision shall be sent to—

(1) The person to whom the notice or order was issued;

(2) Any person who filed a report which led to the notice or order; and

(3) The State regulatory authority, if any.

(i) The granting or waiver of a mine site hearing shall not affect the right of any person to request formal review under Sections 518(b), 525, 521(a)(4) of the Act.

(j) At such hearings no evidence as to statements made or evidence produced at a mine site hearing shall be introduced as evidence or to impeach a witness. Expiration of a notice or order shall not affect the Director's right to assess civil penalties for the violations mentioned in the notice or order under 30 CFR 845, civil penalties.

§ 843.16 Formal review of citations.

(a) A person issued a notice of violation or cessation order under 30 CFR 843.11 or 843.12 or a person having an interest which is or may be adversely affected by the issuance, modification, vacation or termination of a notice or order, may request review of that action by filing an application for review and request for hearing, under 43 CFR Part 4, within 30 days after receiving notice of the action.

(b) The filing of an application for review and request for a hearing under this Section shall not operate as a stay of any notice or order, or of any modification, termination or vacation of either.

§ 843.17 Failure to give notice and lack of reasonable relief.

No notice of violation, cessation order or order revoking or suspending a permit may be vacated in an administrative review proceeding for failure to give the notice to the State regulatory authority required under 30 CFR 842.11(b)(1)(ii) or because it is subsequently determined that the Office did not have information sufficient, under 30 CFR 842.11(b)(1)(i), to justify an inspection.

§ 843.18 Inability to comply.

(a) No order to show cause, cessation order or notice of violation issued under this Part may be vacated because of inability to comply.

(b) Unless caused by lack of diligence, inability to comply may be considered only in mitigation of the amount of civil penalty under 30 CFR 845 and of the duration of the suspension of a permit under 30 CFR 842.16(d).

§ 843.19 Injunctive relief.

The Office may request the Attorney General of the United States to institute a civil action for relief, including a permanent or temporary injunction, restraining order or any other order, in the district court of the United States for the district in which the surface coal mining and reclamation operation is located or in which the person to whom the notice of violation or order has been issued has his principal office, whenever that person or his agent in violation of the Act, this Chapter, any applicable program, or any permit condition imposed under that program:

(a) Violates or fails or refuses to comply with any order or decision of the Secretary or an authorized representative of the Secretary under the Act, this Chapter or any applicable program for which the Office is the regulatory authority;

(b) Interferes with, hinders or delays the Secretary or an authorized representative of the Secretary;

(c) Refuses to admit an authorized representative of the Secretary to a mine;

(d) Refuses to permit inspection of a mine by an authorized representative of the Secretary;
(e) Refuses to furnish any required information or report;
(f) Refuses to permit access to or copying of any required records; or
(g) Refuses to permit inspection of monitoring equipment.

PART 845—CIVIL PENALTIES

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845.2 Objective.
845.11 How assessment are made.
845.12 When penalty will be assessed.
845.13 Point system for penalties.
845.14 Determination of amount of penalty.
845.15 Assessment of separate violations for each day.
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845.17 Procedures for assessment of civil penalties.
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845.20 Final assessment and payment of penalty.

AUTHORITY: Secs. 102, 201, 501(b), 517, 518, 521, 523 and 525 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 498, 499, 504, 510, and 511 (30 U.S.C. 1202, 1211, 1251, 1267, 1268, 1271, 1273 and 1275.)

§ 845.1 Scope.

This Part covers the assessment of civil penalties under Section 518 of the Act with respect to cessation orders and notices of violation issued under Part 843 (Federal enforcement).

§ 845.2 Objective.

Civil penalties are assessed under Section 518 of the Act and this Part to deter violations and to ensure maximum compliance with the terms and purposes of the Act on the part of the coal mining industry.

§ 845.11 How assessment are made.

The Assessment Office shall review each notice of violation and cessation order in accordance with the assessment procedures described in 30 CFR 845.12, 845.13, 845.14, 845.15, and 845.16 to determine whether a civil penalty will be assessed, the amount of the penalty, and whether each day of a continuing violation will be deemed a separate violation for purposes of the total penalty assessed.

§ 845.12 When penalty will be assessed.

(a) The Assessment Office shall assess a penalty for each violation contained in a cessation order.

(b) The Assessment Office shall assess a penalty for each violation contained in a notice of violation, if the violation is assigned 31 points or more under the point system described in 30 CFR 845.13.

(c) The Assessment Office may assess a penalty for a violation assigned 30 points or less under the point system described in 30 CFR 815.13. In determining whether to assess a penalty, the Assessment Office shall consider the factors listed in 30 CFR 845.13.

§ 845.13 Point system for penalties.

(a) The Assessment Office shall use the point system described in this section to determine the amount of the penalty and, in the case of notices of violation, whether a mandatory penalty should be assessed as provided in 30 CFR 845.12(b).

(b) Points shall be assigned as follows:

(1) *History of previous violations.* The Assessment Office shall assign up to 30 points based on the history of previous violations. One point shall be assigned for each past violation contained in a notice of violation. Five points shall be assigned for each violation, but not a condition or practice, contained in a cessation order. The history of previous violations, for the purpose of assigning points, shall be determined and the points assigned with respect to a particular surface coal mining operation. Points shall be assigned as follows:

(i) Except as provided in paragraph (b)(1)(ii) of this section, only violations for which notices or orders were issued within 1 year preceding the violation under consideration shall be counted;

(ii) A violation which is the subject of pending administrative or judicial review shall not be counted until termination of such review, and the period of time during which the violation was under review shall not be counted in computing the one-year period;

(iii) No violation for which the notice or order has been vacated shall be counted; and

(iv) Each violation shall be counted without regard to whether it led to a civil penalty assessment.

(2) *Seriousness.* The Assessment Office shall assign up to 30 points based on the seriousness of the violation, according to the following schedules:

(i) *Probability of occurrence.* The Assessment Office shall assign up to 15 points based on the probability of the occurrence of the event which a violated standard is designed to prevent. Points shall be assessed as follows:

Probability of occurrence	Points
None or insignificant	0-4
Unlikely	5-9
Likely	10-14
Occurred	15

An example of the concept of the phrase "the event which a violated standard is designed to prevent" is as follows: failure to remove topsoil is a violation of the topsoil standard in 30 CFR 816.22; however, delay in and failure of revegetation and resulting environmental harm are events which the topsoil standard in 30 CFR 816.22 is designed to prevent.

(ii) *Extent of potential or actual damage.* The Assessment Office shall assign up to 15 points based on the extent of the potential or actual damage, in terms of area and impact on the public or environment, as follows:

(A) If the damage or impact which the violated standard is designed to prevent would remain within the permit area, the Assessment Office shall assign zero to seven points depending on the duration and extent of the damage or impact.

(B) If the damage or impact which the violated standard is designed to prevent would extend outside the permit area, the Assessment Office shall assign eight to fifteen points depending on the duration and extent of the damage or impact.

(iii) *Alternative.* In the case of a violation of an administrative requirement, such as a requirement to keep records, the Assessment Office shall, as an alternative to paragraphs (i) and (ii), assign up to 15 points for seriousness based upon the extent to which enforcement is obstructed by the violation.

(3) *Negligence.* (i) The Assessment Office shall assign up to 25 points based on the degree of fault of the person to whom the citation was issued in causing or failing to correct the violation, condition or practice which led to the citation, either through act or omission. Points shall be assessed as follows:

(A) A violation which occurs through no negligence shall be assigned no penalty points for negligence;

(B) A violation which is caused by negligence shall be assigned 12 points or less, depending on the degree of negligence;

(C) A violation which occurs through a greater degree of fault than negligence shall be assigned 13 to 25 points depending on the degree of fault.

(ii) In determining the degree of negligence involved in a violation and the number of points to be assigned, the following definitions apply:

(A) No negligence means an inadvertent violation which was unavoidable by the exercise of reasonable care.

(B) Negligence means failure to prevent or correct a violation due to indifference, lack of diligence, or lack of reasonable care, or the commission of an act which results in a violation with indifference, lack of diligence or lack of reasonable care.

(C) A greater degree of fault than negligence means reckless, knowing or intentional conduct.

(iii) In calculating points to be assigned for negligence, the actions of all persons working on the mine site shall be attributed to the person to whom the citation was issued.

(4) *Good faith in attempting to achieve compliance.* (i) The Assessment Office shall subtract or add points based on the degree of good faith of the person to whom the citation was issued in attempting to achieve rapid compliance after notification of the violation. Points shall be assigned as follows:

Degree of Good Faith	Points
Rapid compliance	−1 to −10
Normal compliance	0
Lack of good faith	1 to 10

(ii) The following definitions shall apply under paragraph (b)(4)(i) of this section:

(A) *Rapid compliance* means that the person to whom the citation was issued took extraordinary measures to abate the violation in the shortest possible time and that abatement was achieved before the time set for abatement.

(B) *Normal compliance* means the person to whom the citation was issued abated the violation within the time given for abatement.

(C) *Lack of good faith* means the person to whom the citation was issued did not show diligence in attempting to abate the violation and the violation was not timely abated.

(iii) If the consideration of this criterion is impractical because of the length of the abatement period, the assessment may be made without considering this criterion, and may be reconsidered if the person to whom the citation was issued so requests within 10 days after the violation has been abated.

§ 845.14 Determination of amount of penalty.

The Assessment Office shall determine the amount of any civil penalty by converting the total number of points assigned under 30 CFR 845.13 to a dollar amount according to the following schedule:

Points	Dollars	Points	Dollars
1	20	2	40
3	60	4	80
5	100	6	120
7	140	8	160
9	180	10	200
11	220	12	240
13	260	14	280
15	300	16	320
17	340	18	360
19	380	20	400
21	420	22	440
23	460	24	480
25	500	26	600
27	700	28	800
29	900	30	1,000
31	1,100	32	1,200
33	1,300	34	1,400
35	1,500	36	1,600
37	1,700	38	1,800
39	1,900	40	2,000
41	2,100	42	2,200
43	2,300	44	2,400
44	2,400	45	2,500
46	2,600	47	2,700
48	2,800	49	2,900
50	3,000	51	3,100
52	3,200	53	3,300
54	3,400	55	3,500
56	3,600	57	3,700
58	3,800	59	3,900
60	4,000	61	4,100
62	4,200	63	4,300
64	4,400	65	4,500
66	4,600	67	4,700
68	4,800	69	4,900
70 and above	5,000.		

§ 845.15 Assessment of separate violations for each day.

(a) The Assessment Office may assess separately a civil penalty for each day from the date of issuance of the notice of violation or cessation order to the date set for abatement of the violation. In determining whether to make such an assessment, the Assessment Office shall consider the factors listed in 30 CFR 845.13 and the extent to which the person to whom the citation was issued gained any economic benefit as a result of a failure to comply.

(b) Whenever a violation has not been abated within the abatement period set in the citation, a civil penalty of not less than $750 shall be assessed for each day during which such failure continues, except that if the person to whom the notice or order was issued initiates review proceedings with respect to the violation the abatement period shall be extended as follows:

(1) If the Secretary orders suspension of the abatement requirements of the notice or order in a proceeding under section 525 of the Act, after determining that the person to whom the citation was issued will suffer irreparable loss or damage from the application of the requirements, the period permitted for abatement shall not end until the date on which the authorized representative of the Secretary issues a final order with respect to the violation in question; and

(2) If a court orders the suspension of the abatement requirements of the notice or order in a proceeding under section 526 of the Act, the period permitted for abatement shall not end until the date on which the court issues a final order with respect to the violation.

(c) For any violation which continues for two or more days and which is assigned more than 70 points under 30 CFR 845.12, the Assessment Office shall assess a civil penalty for a minimum of two separate days.

§ 845.16 Waiver of use of formula to determine civil penalty.

(a) The Director, upon his own initiative or upon written request received within 10 days of issuance of a notice of violation or a cessation order, may elect to waive in whole or in part the use of the formula contained in 30 CFR 845.13 to set the civil penalty if he determines that a waiver will further the enforcement objectives of the Act. However, the Director shall not waive the use of the formula and reduce the proposed assessment on the basis of an argument that a reduction in the proposed penalty could be used to abate violations of the Act.

(b) If the Director waives the use of the formula in whole or in part, he shall give a written explanation of the basis for the assessment made to the person to whom the notice or order was issued.

§ 845.17 Procedures for assessment of civil penalties.

(a) Within 10 days of service of a notice or order, the person to whom it was issued may submit written information about the violation to the Assessment Office and to the inspector who issued the citation. The Assessment Office shall consider any information so submitted in determining the facts surrounding the violation and the amount of the penalty.

(b) The Assessment Office shall serve a copy of the proposed assessment and of the worksheet showing the computation of the proposed assessment on the person to whom the citation was issued, by certified mail, within 30 days of the issuance of the citation. If the mail is tendered at the address of that person set forth in the sign required under 30 CFR 816.11, or at any address at which that person is in fact located, and he refuses to accept delivery of or to collect such mail, the requirements of this paragraph shall be deemed to have been complied with upon such tender.

§ 845.18 Procedure for assessment conference.

(a) The Assessment Office shall arrange for a conference to review the proposed assessment upon written request of the person to whom the citation was issued if the request is received within 15 days from the date the proposed assessment is mailed. That person may submit additional material for consideration during the conference, and the Assessment Office may contact him to discuss the assessment prior to the conference, if necessary to expedite the review.

(b) The Assessment Office shall assign a conference officer to hold the assessment conference. He shall consider all relevant information on the violation presented by the person to whom the citation was issued and may recalculate the proposed penalty higher or lower in the manner provided in 30 CFR 845.13 or vacate the proposed penalty. The Assessment Office shall serve any notice of modification or vacation of the proposed penalty assessment on the person to whom the citation was issued, in the manner provided in 30 CFR 845.17(b). The reasons for every change in a proposed assessment shall be fully documented in the file.

(c) The Assessment Office shall post notice of the time and place of the conference at the regional, district or field office closest to the mine at least 5 days before the conference. Any person shall have a right to attend and participate in the conference.

(d) If the issues are resolved, the conference officer shall prepare a settlement agreement to be signed by the conference officer on behalf of the Assessment Office and by the person assessed. If full payment is not received by the Assessment Office within 30 days after the date of signing, the Assessment Office shall enter the agreed-upon amount as a final order of the Secretary or shall rescind the agreement and reinstate the original proposed assessment.

(e) If a settlement agreement is entered into, the person assessed will be deemed to have waived all rights to further review of the violation or penalty in question, except as otherwise expressly provided in the settlement agreement. The settlement agreement shall contain a clause to this effect.

(f) A reduction of a proposed civil penalty assessment of more than 25 percent and more than $500 shall not be final and binding on the Secretary until approved by the Director or his designee.

(g) The conference officer may terminate the conference when he determines that the issues cannot be resolved or that the person assessed is not diligently working toward resolution of the issues.

(h) The Assessment Office shall notify the Office of Hearings and Appeals when a conference is terminated, the proposed penalty is raised or lowered, a settlement agreement has been entered into, or the proposed penalty has been paid in full.

§ 845.19 Request for hearing.

(a) The person assessed may contest the proposed penalty or the fact of the violation by submitting a petition and an amount equal to the proposed penalty to the Office of Hearings and Appeals (to be held in escrow as provided in paragraph (c)) within 30 days from receipt of the proposed assessment, except that:

(1) The fact of the violation may not be contested if it has been decided under an appeal filed under 30 CFR 843.16;

(2) If the conference officer raises the penalty as provided in 30 CFR 845.18(b), the person assessed shall submit the difference to the Office of Hearings and Appeals to be held in escrow as provided in paragraph (c), within 30 days of the modification of the proposed assessment or waive his right to further review under this Section; and

(3) If the conference officer lowers the penalty, the Assessment Office shall refund the difference to the person assessed with interest, as provided in 30 CFR 845.20(d).

(b) If a conference under 30 CFR 845.18 has been requested:

(1) The hearing shall be deferred until—

(i) The Assessment Office notifies the Office of Hearings and Appeals that the conference has been terminated, or the proposed penalty has been reduced; or

(ii) If the proposed penalty has been raised, the difference is submitted as provided in paragraph (a)(2) of this section.

(2) The hearing shall be waived if a settlement agreement is entered into as provided in 30 CFR 845.18(e).

(c) The Office of Hearings and Appeals shall transfer all funds submitted under paragraph (a) to the Assessment Office, which shall hold them in escrow pending completion of the review process, at which time it shall disburse them as provided in 30 CFR 845.20.

§ 845.20 Final assessment and payment of penalty.

(a) If the person to whom a citation is issued fails to request a hearing as provided in 30 CFR 845.19, the proposed assessment shall become a final order of the Secretary and the penalty assessed shall become due and payable upon expiration of the time to request a hearing.

(b) If any party requests judicial review of a final order of the Secretary, the proposed penalty shall continue to be held in escrow until completion of the review. Otherwise, subject to paragraph (d) of this section, the escrowed funds shall be transferred to the Assessment Office in payment of the penalty, and the escrow shall end.

(c) If administrative and judicial review terminates in an order reducing or eliminating the proposed penalty assessed under this part, the Assessment Office shall within 30 days of receipt of the order refund to the person assessed all or part of the escrowed amount, with interest from the date of payment into escrow to the date of the refund at the rate of 6 percent or at the prevailing Department of the Treasury rate, whichever is greater.

(d) If the review terminates in an order increasing the penalty, the person to whom the citation was issued shall pay the difference to the Assessment Office within 10 days after receipt of the order.

SUBCHAPTER M CERTIFICATION AND TRAINING OF BLASTERS AND BLASTER LEARNERS

REQUIREMENTS FOR BLASTER CERTIFICATION PROGRAM

Sec.
850.1 Scope.
850.2 Objectives.
850.3 Responsibility.
850.5 Definitions.
850.11 Training Programs.
850.12 Examinations.

AUTHORITY: Secs. 102, 201, 501(b), 515, 719, of Pub. L. 95-87, 91 Stat. 448, 449, 468, 486 and 526 (30 U.S.C. 1202, 1211, 1251, 1265 and 1309).

§ 850.1 Scope.

This part establishes program requirements and criteria for the training, examination and certification of persons engaging in or directly responsible for blasting or the use of explosives in surface coal mining and reclamation operations.

§ 850.2 Objectives.

The objectives of this part are:

(a) To establish minimum requirements and criteria for a training course in the use of explosives to ensure that blasting operations are conducted by well trained persons, and

(b) To establish standard examination and certification requirements to assure that blasting operations are conducted by competent persons.

§ 850.3 Responsibility.

(a) The Director is responsible for establishing a national examination for persons engaged in or directly responsible for blasting or the use of explosives in surface coal mining and reclamation operations and requirements governing the administration of that examination.

(b) Each Regional Director of the Office is responsible for:

(1) Reviewing and approving training, examination and certification programs proposed in a State program submitted under 30 CFR 731.

(2) Establishing and conducting Federal training courses and examining and certifying qualified blasters or blaster learners, in a State which does not have an approved State program after August 3, 1979, or for each

person working on Federal lands after February 3, 1979.

(3) Monitoring approved State training courses, examinations and certification programs to ensure compliance with the requirements of this Part.

(c) Each State is responsible for:

(1) Preparing and submitting to the Regional Director on or before February 3, 1979, a State plan for the training, examination, and certification of blasters and blaster learners within a State program submitted under 30 CFR 731, which meets the requirements of this part, or notifying the Director of an intention not to submit a plan;

(2) Requiring that any person engaging in or directly responsible for blasting or use of explosives in surface coal mining and reclamation operations in the State shall, on and after the approval of a State program, be certified by the State or Federal government;

(3) Conducting training programs, holding examinations, and certifying blasters and blaster learners under an approved State plan;

(4) Approving and monitoring training programs conducted by any surface coal mine operator to ensure compliance with the requirements of State regulations where the program is authorized under an approved State program; and

(5) Collecting, maintaining and providing the Office with data on course attendance, test results and other information the Office may require.

(d) Any person who intends to be directly responsible for the conduct of blasting or use of explosives in surface coal mining and reclamation operations shall obtain a blaster's certification after approval of a State plan or implementation of a Federal program for certification before conducting these activities.

(e) Any person who intends to engage in, but not be directly responsible for the conduct of, blasting or using explosives in surface coal mining and reclamation operations shall obtain a blaster learners certificate after approval of a State plan or implementation of a Federal program for certification before engaging in these activities.

§ 850.5 Definitions.

Blaster means any person engaging in or responsible for conducting blasting or use of explosives in surface coal mining and reclamation operations.

Blaster learner means any person engaging in blasting or using explosives on surface coal mining and reclamation operations under the direct supervision of a certified blaster.

§ 850.11 Training programs.

A State program may provide that the State regulatory authority conduct all training to meet the requirements of this part, or that training courses will be conducted by surface coal mine operators under the supervision of the State. In either case the training course must be approved by the Office and at a minimum meet the requirements of this section.

(a) Each Instructor shall have a thorough knowledge of the subject matter they teach and have had practical field experience in its application.

(b) The course of training for blaster learners shall be the course required by the Mine Health and Safety Administration, and an introductory course in blasting and the use of explosives as approved by the Office.

(c) The course of training for blasters shall, at a minimum, include instruction in:

(1) The storage, transportation and use of explosives for blasting purposes;

(2) The design and layout of blast patterns, including proper use of delays;

(3) Loading of boreholes;

(4) Priming and boosting;

(5) Tamping and stemming;

(6) Blasting with detonating cord and other nonelectrical initiating systems;

(7) The use of blasting machines;

(8) The use of testing machines;

(9) The hazards and dangers involved in the use of explosives for blasting purposes;

(10) The chemical and physical properties of explosives;

(11) Ground vibrations and methods of monitoring and control;

(12) Air blast and methods of monitoring and control;

(13) Electrical blasting hazards;

(14) The need for accurate reports and blasting logs; and

(15) Any other subject matter that a State or the Office may require.

(c) On the job training shall be encouraged to the extent possible.

§ 850.12 Examinations.

(a) Examinations for blasters and blaster learners shall be conducted as needed by:

(1) The State regulatory authority in each State where there is an approved State program; and

(2) The Office in each State where there is a Federal program and for operations on Federal lands where there is no cooperative agreement between the State and the Office.

(b) The examination for blasters shall be a written examination established by the Office and shall include questions related to:

(1) Explosive energy;

(i) Types of explosives;

(ii) Selection of explosives; and

(iii) Explosive properties.

(2) Blast design:

(i) Important rock and explosives properties;

(ii) Design of blast holes;

(iii) Pattern design, surface blasting, including timing of blast holes with delay intervals and spacing burden and stemming; and

(iv) Controlled blasting techniques.

(3) Loading boreholes:

(i) Priming and boosting; and

(ii) Decking.

(4) Initiation systems:

(i) Electric;

(ii) Detonating cord;

(iii) Shock tube;

(iv) Gas detonation; and

(v) Additional initiation systems, as developed.

(5) Ground vibrations, air blast and fly rock monitoring and control.

(i) Monitoring and control.

(6) Secondary blasting.

(7) Current Federal and State blasting regulations.

(8) Such other matters as the State or the Office may require.

(c) Examinations for blaster learners shall be those prescribed and utilized in the introducotry blasting course required by the Office and the Mine Health and Safety Administration.

PART 851—MINIMUM REQUIREMENTS FOR CERTIFICATION OF BLASTERS

Sec.

851.1 Scope.
851.11 Certification procedures.
851.12 Terms and conditions of certification.
851.13 Recertification.
851.14 Restrictions.
851.15 Appeals.

AUTHORITY: Secs. 102, 201, 501(b), 515, and 719 of Pub. L. 95-87, 91 Stat. 448, 449, 468, 486 and 526 (30 U.S.C. 1202, 1211, 1251, 1265 and 1309).

§ 851.1 Scope.

This Part sets forth the minimum requirements that a person responsible for conducting blasting or use of explosives on surface coal mining and reclamation operations shall meet in order to become certified as a blaster by the State regulatory authority or the Office. It also provides a basic description of the terms and conditions of certification, the requirements for recertification, the minimum restriction on a Blaster's Certification and the procedures for appealing a decision with regard to suspension or revocation of a Blaster's Certification.

§ 851.11 Certification procedures.

(a) Each applicant for Blaster's certification shall be required to pass a qualifying examination established by the Office according to the requirements of 30 CFR 850.12. Each applicant may use one of the following con-

ditions as a prerequisite for taking the certification examination:

(1) A signed notorized statement from the applicant's employer or other responsible person's certifying that the applicant is experienced in blasting; or

(2) Completion of a course in blasting approved by the Office, according to the requirements of 30 CFR 850.11.

(b) Applicants failing to qualify in the examination may reapply for examination by submitting a new application to the examining authority.

(c) Each applicant for blaster's certification must show proof of completion of the Mine Health and Safety training as required by the Mine Health and Safety Administration prior to being certified.

(d) Each applicant for blaster's certification shall have at least two years experience in blasting as applicable to surface coal mining operation.

(e) Each applicant for a Blaster's certification shall be notified in writing whether they have qualified or failed to qualify in the examination for Blaster's certification, within 30 days from the date of the examination.

(f) If the applicant qualifies in the examination, the State regulatory authority or the Office may grant certification if the application shows that all other requirements are met.

§ 851.12 Terms and conditions of certification.

(a) Certification shall be for a period of 3 years.

(b) A certificate of certification shall be issued only to an individual qualified in accordance with the requirements of section 850.12(c) of this part and shall bear his name, address, photograph, and signature.

(c) Each blaster or blaster learner shall, upon request, exhibit his certificate of certification to any duly authorized representative of the regulatory authority or the Office.

(d) After appropriate notice and an opportunity for an appeal, according to the requirements in section 851.15, the regulatory authority of the Office may suspend or revoke the certification of a blaster or blaster learner for any of the following reasons:

(1) Non-compliance with any order of the regulatory authority;

(2) Violation of the provisions of any State or Federal explosive law or regulation, or proof that false information was willfully given or a misrepresentation was willfully made to obtain the certification; or

(3) The Blaster or learner is an unlawful user of, or is addicted to, alcohol, narcotics, or other dangerous drugs.

§ 851.13 Recertification.

(a) Each blaster or blaster learner may apply for recertification every three (3) years to the regulatory authority or the Office. Before being recertified, blasters must complete an 8 hour refresher course required by the Office.

(b) Each blaster or blaster learner who fails to obtain recertification every 3 years may be required to apply for re-examination by submitting proper application accompanied by the appropriate fee, if required. In any event, re-examination is required every six years.

(c) Any individual whose certification has been suspended shall be required to pass a qualifying examination before being recertified.

§ 851.14 Restrictions.

(a) A blaster or blaster learner certification shall not be assigned or transferred.

(b) A blaster shall not delegate their responsibility to any individual who is not a certified blaster.

(c) The certified blaster-in-charge shall fire all blasts. When more than one certified blaster is engaged in the preparation for a blast, the operation's management shall designate the blaster-in-charge.

(d)(1) The blaster-in-charge shall be on the actual site of the blasting operation and shall directly supervise each blasting crew which may not exceed 6 learners per crew. The blaster-in-charge shall not be responsible for nor supervise more than one crew at any one time.

(2) The blaster-in-charge may authorize learners to perform general blasting operations, to load and unload explosives, prepare explosives for use in blasting, transport explosives at or near the job site, charge explosives into drill holes, tamp, or otherwise prepare explosives for detonation. However, each of these duties shall be performed only after instructions from and under the direct supervision of the blaster-in-charge. The blaster-in-charge has the full responsibility for all blasting including keeping of blasting logs and records, the blasting related activities of the learners in his charge, and for ensuring that all persons under his supervision have the necessary training to safely perform their duties.

§ 851.15 Appeals.

(a) Any person whose certification has been suspended or revoked may, within 30 days from the date of notice of this action, appeal the decision to the Director, The appeal shall contain a statement of the decision being appealed and facts upon which the requested reversal or modification of the decision is based.

(b) The Director shall take appropriate action on the appeal within 30 days from receipt of the appeal.

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